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THE DEVELOPMENT
OF PRINTING AS AN ART
A HANDBOOK
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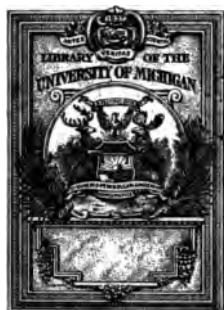


PUBLICATIONS OF THE SOCIETY, NUMBER II
BOSTON, MASSACHUSETTS
JANUARY 1 TO 29, 1906



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THE DEVELOPMENT 50
OF PRINTING AS AN ART



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PUBLICATIONS OF THE SOCIETY, NUMBER II
BOSTON, MASSACHUSETTS
JANUARY 1 TO 29, 1906

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FOR THE STUDY AND ADVANCEMENT OF
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THE DEVELOPMENT OF PRINTING AS AN ART

THIS Exhibition is made by the Society of Printers, Boston, in connection with the celebration of the two hundredth anniversary of the birth of Benjamin Franklin. It is planned on lines differing from any which has been held heretofore. There have been interesting and important exhibitions of books and book-bindings under the auspices of various clubs and literary organizations, and general displays of contemporaneous work at the Columbian, Pan-American, and Louisiana Purchase Expositions. The present active interest in printing is such that this exhibition, arranged upon definite and comprehensive lines, has been determined upon. The general purpose is to arrange exhibits in definite sequence, beginning with manuscripts and incunabula, showing the evolution from the written to the printed book, together with a few examples of printing representative of the centuries which followed, illustrating the development in types, format, and other features.

This leads naturally to a carefully chosen display in modern printing, and progressive processes showing how illustrations and paper are made. These are displayed in proper sequence, carefully numbered and labelled, so that the visitor can understand and follow the meaning of each example.

The interest and educational value of the exhibits will be greatly strengthened by following them with this Handbook, which contains a running synopsis, showing the bearing which each exhibit has upon the Development of Printing as an Art.

THE MAKING OF EARLY BOOKS

THE MSS. and early printed books exhibited are not intended to comprise a representative collection of the work of the old-time scribes and master printers, but rather to show the influence which the making of books during these periods has exerted upon modern book-making. It is a common impression that the Art of Printing dates from Gutenberg, and that it sprang "fully armed, like Minerva, from the brow of Jove." In reality the printed book was an evolution from the written book, and for that reason one should begin by studying the conditions and tendencies of the century which preceded Gutenberg in order to understand what influences *necessitated* Gutenberg's practical application of the marvellous latent power of movable types, which the Greeks and the Romans, the Chinese and the Koreans, had failed to appreciate.

The examples of German printing, which are the earliest known, were immediately surpassed in excellence by the work executed in Italy, then the home of scholarship, whither the German printers naturally carried it. It is Italy, therefore, which exerted the first great influence in the Development of Printing as an Art, and the exhibition begins with books produced in this country.

THE WRITTEN BOOK

Department A, No. 1, is a small Book of Hours, hand-written upon uterine parchment (the skin of still-born kids), by a Humanistic scribe. Its school represents the highest point of perfection ever reached in hand-lettering. Its date is about 1485, — after the date of the invention of printing.

One would naturally suppose that the art of hand-lettering would decline upon the introduction of the

new art, but as a matter of fact illumination and hand-lettering received a tremendous impetus from the opposition of the wealthy patrons of MS. books to the new discovery. Until Gutenberg, the possession of libraries was confined to the rich, and to their minds to have books become common meant the degradation of book-making and danger to the State: degrading because these wealthy patrons were true lovers of literature and regarded the gems of thought as the most precious of all gems, and far too precious to be put before the world in a cheapened form; dangerous because they foresaw that the printed book would place science and literature in the hands of the masses, that it would make men think and argue and gain self-reliance from their new intellectual development.

The opposition of these wealthy patrons took the form of an increased encouragement of the scribes and illuminators. The great Humanistic movement which had swept over the world, preparing it for the Renaissance which was to follow, released the Classics from the ban which the Church had placed upon them. Until then libraries were made up chiefly of religious books. The patrons, therefore, at the time of Gutenberg's discovery, encouraged the scribes and illuminators by ordering written copies of the Classics to such an extent that hand-lettering, as an art, reached its highest point of perfection.

Dept. A, No. 2, is a reproduction of an illuminated Italian manuscript of the fifteenth century. The text is the Humanistic hand-lettering, the same school as is shown in Dept. A, No. 1, though by a different hand; and the ornamentation is of the highest class. The most characteristic feature is the interlaced white-vined tendril design, standing out in seeming relief upon a ground of blue, green, and pink, this style being, in a measure, a revival of that of the twelfth century. Note the introduction of the coat-of-arms and figures of birds.

The multitude of small-rayed golden discs is said to have been a favorite design of Lorenzo de Medici, whose patronage of art and letters at this period was munificent.

Dept. A, No. 3, is a Latin Choir Book of the same period. Here the illumination is in pen and ink. The solids are painted in. The red ink is made of minium and the blue of crushed lapis-lazuli stone. The style of lettering is Gothic. From this style have been cut the best Gothic type-faces of to-day.

The Written Book — Summary of Exhibits

No. 1. Book of Hours, in Humanistic hand-lettering. Date, about 1485.

Lent by a Member of The Society of Printers.

No. 2. St. Augustine, "de Civitate Dei." Reproduction of an illuminated Italian MS. of the XV century. Illuminator and scribe unknown. Date, 1484.

Lent by a Member of The Society of Printers.

No. 3. Latin Choir Book, in Gothic hand-lettering, illuminated in blue and red. Date, about 1480.

Lent by the Harvard College Library (Norton Collection).

THE SUPREMACY OF ITALY, 1470-1530

WHEN the wealthy patrons found that they could not suppress the new invention of printing, they endeavored to effect a compromise. They arranged with the printer to leave a large square blank for the initial, and wide margins, so that the illuminator could decorate the page with gorgeous ornamentation. An example of this is shown in

Dept. A, No. 4. This shows a reproduction of a page of an early printed book in which the wealthy patron (in this case Ludovico Sforza il Moro) sought to overwhelm the printed page by the magnificence of the illuminator's art. The volume from which this is taken was printed in Milan in 1490 by Antonio Zarotto, of Parma. The name of the illuminator is unknown, but he must have been one of the best of the Milanese school.

THE work of the early Italian printers shows that in cutting their types they adopted the restored book-hand, imitated from the MSS. of the time of Charlemagne, which had come into use in Italy at the end of the previous century. But it was in Venice, whither Nicolas Jenson came from France about 1470, that this Roman type attained its greatest beauty. An example of this is shown in

Dept. A, No. 5, which is one of the earliest books Jenson printed (1470). The design and cut of the letters, and the paper, which is almost vellum, combine to produce a superb volume. The presswork does not run as evenly as in the next exhibit.

Jenson's Gothic type, which also became famous, is shown in

Dept. A, No. 6. This volume was printed in 1475. It shows careful typography, excellent presswork, and ink and paper which have successfully stood the test of over four centuries.

ALDUS MANUTIUS, whose name is perhaps best known after that of Gutenberg, established a press in Venice in 1490. He cut no less than nine varieties of Greek type and fourteen of Roman letters. He designed the first font of Italic (so named because originated in Italy), said to be based upon Petrarch's peculiar form of handwriting. He was an ardent Humanist, and he wished

to make his books accessible to the people. To accomplish this he issued a pocket series of Greek, Latin, and Italian classics, beautifully made, which sold at the equivalent of fifty cents each. He was among the first to print on parchment, and did much to improve the quality of paper.

Dept. A, No. 7, shows perhaps the most famous book which issued from Aldus' press. It was printed in 1499, in his most beautiful Roman font, the typography and presswork, combining woodcuts and letterpress, being particularly noteworthy. The ending of the chapter, approaching the half-diamond formation, the spacing of the capital letters below, the initial letter and the first line in capitals, on the left-hand page shown, evince great thought and care in the composition.

Dept. A, No. 8, is another production of the Aldine Press in the same year, 1499. Note the blank space left for the illuminator. There are no regular folios, but at the foot of the last page of each signature is a catchword, or *richiamo*, for the guidance of the binder, in this case "IVLII."

The Supremacy of Italy, 1470-1530 — Summary of Exhibits

No. 4. La Historia delle cove facte dallo invictissimo Duca Francesco Sforza. Printed by Antonio Zarotto, of Parma, in Milan in 1490. Illuminator unknown. Reproduction of a page showing effort to overshadow the printing by the illumination.

Lent by a Member of The Society of Printers.

No. 5. Eusebius Pamphili de evangelica. Printed by Nicolas Jenson in Venice in 1470, showing the best Roman face of the period.

Lent by William G. Shillaber, Esq.

No. 6. Augustinus Aurel. de Civitate Dei. Printed by Nicolas Jenson in Venice, in 1475, showing one of the best Gothic types of the period.

Lent by a Member of The Society of Printers.

No. 7. Hypnerotomachia Poliphili. Printed by Aldus Manutius in Venice in 1499. The most famous of Venetian illustrated books.

Lent by the Harvard College Library (Norton Collection).

No. 8. Julius Firmicus Maternus. Printed by Aldus Manutius in Venice in 1499. Shows his best Roman face.

Lent by the Harvard College Library (Norton Collection).

THE SUPREMACY OF FRANCE, 1530-1570

To understand the direction given to the press in France at this period, we must remember that two principal influences operated upon it simultaneously, but not in the same way. These two influences were identical with those which gave Italy her earlier pre-eminence which had passed from her to France with the death or downfall of her noble patrons: namely, the demand of the public and the patronage of the Court. Francis I. of France successfully exerted his patronage to develop the material beauty and splendor of books. Grolier was encouraged to bind, and Robert Stephens (or *Estienne*) to print. A magnificent Greek type was cast at the cost of the royal treasury. When a sumptuary law prohibited gilding in houses and furniture, book-binding was by a special clause exempted from its operation. All that promoted that exterior *luxe* which the French "Librairie" has always courted, — the expanse of margin, the thick wove paper, and brilliant types, — that was the idea which the master of

Rosso and Cellini formed of his patronate of letters. The magnificence of the Revival has left its mark behind it in the Greek editions which issued from the press of Robert Stephens, "printer to the king."

On the other hand, the spirit of curiosity, which had arisen among the public, made far other demands upon the press. It wanted to learn. It desired books not to place in a cabinet, but to read, in order to know. As in Italy, it wanted to know, first and foremost, the truth in the matter of religion; next, to know the cause and remedies of moral and material evils, by which the people felt themselves crushed. But the press as the medium of knowledge was not the press which the government of Francis I. would encourage. This is why some historians invoke this monarch as the Father of Letters, the Mæcenas of the Arts, while others brand him as a bigot and a persecutor. The truth is that Francis I. was both these at once. Emulous of the credit which the Italian princes had acquired by their patronage of art, he munificently encouraged letters and learned men. He would have his own printer and his own type, which should give editions that would eclipse anything that had been done in Italy. Yet he would annihilate the art of printing sooner than allow it to become a vehicle of opinion. Hence the senseless edict of 13 January, 1534, by which the Protector of Letters forbade any printer to print anything whatever without the royal license, under pain of death.

In 1526 Robert Stephens came into possession of the printing establishment founded by his father in Paris. Between that date and 1559, when he died, not a year elapsed in which he did not turn out several volumes, some of them treasures of art, all of them far surpassing anything that had been before seen in France. Sometimes it was a pocket Greek Testament in minion letters, yet as clear as the largest pica, sometimes a Bible in three massive folios, with notes and various readings;

sometimes an "editio princeps" of a Greek classic, or an entirely new Latin lexicon. It must be remembered that in most of these publications the modest imprint on the title conceals instead of proclaims the part which ought to be credited to himself. He was at once printer, corrector, publisher, author.

The examples of Stephens' work is shown in

Dept. A, No. 9. This is a copy of Cicero's "Epistolae," printed in Paris in 1538. By this time books had titlepages, and printers were required by law to place their imprints upon them. The Stephens mark, originated by Henry (I) and made famous by his son Robert and his grandson Henry (II), was an olive-tree with spreading boughs and the motto, "Noli altum sapere sed time." This appears upon the titlepage of this volume. The type is almost an exact copy of Aldus' best Roman font. Folios are employed.

Dept. A, No. 10. The Stephens Press commissioned Angelo Vergecio to design and Garamond, the first French engraver of the day, to cut the Greek fonts which became famous as the "Royal Greeks." The second exhibit shows a volume printed in this type, which is particularly important, as it fixed the form which the Greek press all over Europe followed for more than two centuries. The imprint bears the names of Charles Stephens, a brother of Robert, and a physician, who had taken nominal possession of the property when Robert fled to Geneva to escape the persecution of the Sorbonne.

Henry (II) Stephens, son of Robert, continued his father's business in Geneva, his most famous work being his "Thesaurus" in five volumes, which proved his financial ruin.

*The Supremacy of France, 1530-1570 — Summary
of Exhibits*

No. 9. M. Tullii Ciceronis Epistolae. Printed by Robert Stephens in Paris in 1538.

Lent by the Harvard College Library.

No. 10. ΑΠΡΙΑΝΟΤ ΑΛΕΞΑΝΔΡΕΩΣ ΡΩΜΑΙΚΩΝ. Printed by Charles Stephens in Paris in 1551. Shows the "Royal Greeks."

Lent by a Member of The Society of Printers.

THE SUPREMACY OF BELGIUM, 1570-1600

THE name of Christophe Plantin (1514-1581) stands out pre-eminently at the end of the sixteenth century. The early volumes which came from his press are distinguished for their accuracy, beautiful workmanship, and finish. The most noted is the "Biblia Polyglotta,"

Dept. A, No. 11 (8 vols., 1569-1573), which was printed at Antwerp under the special supervision of Arias Montanus, Court Chaplain of Philip II. of Spain. This was not a financial success, and Plantin turned to cheaper work in his later volumes.

*The Supremacy of Belgium, 1570-1600 — Summary
of Exhibits*

No. 11. Biblia Polyglotta, Vol. I. Printed by Christophe Plantin in Antwerp in 1569.

Lent by the Boston Public Library.

THE SUPREMACY OF HOLLAND, 1600-1700

HENRY STEPHENS' death marked the decline of good printing in France, and for the next one hundred and thirty years there was nothing to equal the standard of work already set. This condition of affairs is per-

haps better understood when one remembers that the experience of the printing presses so far was a warning that an ambition to execute the best work led to certain commercial failure. Sweynheim and Pannartz had ruined themselves by Greek. The Aldine Press had been saved from bankruptcy only by the intervention of Paul IV. The market for learned books was limited in point of numbers, and still more limited in respect to means. The scholars were few and they were poor. Public libraries did not exist. A book, no matter what its size, must be sold for a small sum, if it was to be sold at all. Plantin of Antwerp was almost brought to ruin by his "Polyglott," but he retrieved himself by meaner publications, and died rich. Many of the books of this period are printed upon Swiss unbleached paper, which was less expensive than the French and Italian; and the types were worn down almost to the bone.

Out of this deluge of poor printing which appeared from 1570-1700 the work of Bonaventura and Abraham Elzevir stands out in greater relief because of the contrast. The Elzevirs first became known in Holland as book-binders in 1540, but it was not until 1617 that Isaac Elzevir set up his first printing press, which may be considered as the beginning of the Elzevir work. The twenty-six years which followed the purchase of this press were for the Elzevirs years of glory and success. The early books produced were by no means masterpieces, but following their work, step by step, we find them to have reached the summit of their excellence in the "Caesar," the "Terence," and the "Pliny" of 1635.

The question as to who was the maker of the type punches used by the Elzevirs has caused much discussion, and has never been definitely determined; but it is known that the engraver was a Dutchman named Christopher Van Dyke.

The examples of work from the Elzevir Press are as follows:—

Dept. A, No. 12. A copy of “*Italiae Hodiernae*,” containing excellent maps of the various Italian cities, with description in Latin. This volume was printed by Bonaventura and Abraham Elzevir, in Leyden, in 1627. The cut of the type, the presswork, and particularly the paper, are very inferior, but the engraving of the maps shows much more skilful workmanship.

Dept. A, No. 13. This is a copy of the 1635 Terence which brought the Elzevirs to the height of their fame. In this example will be noted the evident inferiority of the ink, but the typography, the presswork (in two colors), and the general *format* mark a distinct and interesting superiority to the work of other printers of the period.

Dept. A, No. 14. This little copy of John Owen’s “*Epigrams*” was printed at the Elzevir Press in 1647. It is in the smaller size volumes that the work of the Elzevirs shows to best advantage, but even in this will be noticed inferiority in presswork, ink, and paper, although the composition itself shows considerable thought.

*The Supremacy of Holland, 1600-1700 — Summary
of Exhibits*

No. 12. *Italiae Hodiernae*. Printed by Bonaventura and Abraham Elzevir in Leyden in 1627.

Lent by a Member of The Society of Printers.

No. 13. *Pub. Terentii Comoediae Sex*. Printed by Bonaventura and Abraham Elzevir in Leyden in 1635.

No. 14. Owen (J.) “*Epigrammatum*.” Printed by Bonaventura and Abraham Elzevir in Leyden in 1647.

Lent by a Member of The Society of Printers.

THE SUPREMACY OF FRANCE AND ENGLAND

1700-1800

THE family of Didot made its typographical appearance in France in the person of François (1689-1759), and during the eighteenth century he and his descendants succeeded in restoring to their native country the pre-eminence which it had lost. The best publication of François Didot was the "Histoire générale des Voyages," by his friend, the Abbé Prévost, a work in twenty volumes, perfect in text and enriched with many engravings. His son François Ambroise (1720-1808) issued the famous Delphin classics, and another son, Pierre-François (1732-1795), did much to improve type-founding and paper-making. The best productions of the press under him were the "Imitation de Jésus-Christ," "Telémaque," and the "Tableau de l'Empire Ottoman." Henri (1765-1852), eldest son of Pierre-François, made himself famous as an engraver and letter founder, producing the famous "microscopic" types. [See Dept. A, Nos. 22, 23.]

It remained, however, for the two sons of François-Ambroise, Pierre l'ainé (1760-1853) and Firmin (1764-1836), to raise the family name to the pinnacle of professional eminence. Pierre l'ainé carried to completion the beautiful Louvre collection of Latin and French classics which his father had begun for the use of the Dauphin. He was acknowledged the first printer in France, and he aspired to the distinction of being the first printer in Europe. Italy at this time boasted of Bodoni at Parma and England of Baskerville at Birmingham. Firmin Didot revived and developed stereotyping, cut and cast new type faces, and ably seconded his brother's efforts. The "Racine," which they jointly produced in 1801, was pronounced by a French jury to be "the most perfect typographical production of any country or of any age."

An anecdote apropos of the present bi-centennial exhibition is that of Benjamin Franklin's visit to the Didot Press in 1780. The American ambassador approached one of the presses, and after having examined it, he seized the bar and printed several sheets with an ease which surprised the onlookers. "Do not be astonished, gentlemen," said Franklin, "this is my own trade."

The first example of the Didot work is

Dept. A, No. 15. It was printed by François Didot in 1747. Compared with the Stephens work a century earlier, it is poor, but coming as it did out of the mass of wretched printing of the period, François' efforts were hailed by France with joy, because of their promise,—which was amply justified.

The next two exhibits are of particular interest, as they afford an excellent opportunity of comparison.

Dept. A, No. 16, is a copy of Fénélon's Works, printed by François Ambroise Didot in 1787. The paper marks a distinct advance, largely due to his experiments. The type is distinctive, the composition good, and the presswork shows an advance, although the color varies.

Dept. A, No. 17, is a later volume in the same series, which was completed in 1792 by Pierre Didot l'aîné, son of François Ambroise. The type and paper are the same, but Pierre has substituted a single rule for the Oxford, a lighter and smaller face for the headings, and his presswork is much cleaner and more even in color.

Dept. A, No. 18. This copy of Boileau is one of the Louvre editions. It is printed in types engraved and cast by Firmin Didot. This type marks the turning point between the ancient and the modern fonts. The paper is good and the presswork careful.

Note. For convenience of arrangement, the exhibits of the Didot Press are all included in Dept. A, although the following examples properly belong among the modern books (Dept. B).

Dept. A, No. 19. Pierre Didot, l'aîné, and his son Jules issued this sample book of a new series of type in 1819. The type itself and the style of composition are practically identical with Bodoni's work.

Dept. A, No. 20. This little volume of "Tasso," printed by Pierre Didot, l'aîné, in 1820, shows more than the influence of Bodoni, being rather the result of collaboration. The type is the same cut, the ornamental rule at the head of the page is identical, and the general style of typography is that shown in the earlier Italian volumes.

Dept. A, No. 21, shows a volume printed in Greek in 1823 by Jules Didot, son of Pierre Didot, l'aîné. A comparison with the Bodoni Greek shown in Department B is interesting. The format of this volume, even to the ornamental rule, is reminiscent of the Italian influence.

The famous "microscopic" type, produced by Henri Didot, is shown in

Dept. A, No. 22. This copy of "Horace" was printed by Firmin Didot in 1855, and is a superb example of engraving, typography, presswork, and paper.

Dept. A, No. 23. These two sheets show the "brilliant" size of the "microscopic" types.

JOHN BASKERVILLE (1706-1775), upon whom England's claim for consideration in eighteenth-century typography rests, was at first a footman, then a writing-master, and later carried on the business of jappanning with great success. About 1750 he began to make laborious and costly experiments in letter-founding,

and succeeded in producing results which, although not now admired as they once were, showed a revival of interest in printing as an art. Macaulay says of his "Virgil," printed in 1756, that it "was the first of those magnificent editions which went forth to astonish all the librarians of Europe," and which, fifty-five in all, include Milton, Juvenal, Congreve, Addison, the Bible, a Greek New Testament, Horace, and Catullus.

The examples of Baskerville's work shown are as follows:

Dept. A, No. 24. A copy of the "Virgil," showing his early work. [1757.] Benjamin Franklin, in presenting a copy of this volume to the Harvard College Library, wrote (April 28, 1758): "It is thought to be the most curiously printed of any book hitherto done in the world."

Dept. A, No. 25. A copy of the "Horace," printed in 1770, near the close of his life. Both volumes are printed in the same type, which is admirably cut. The composition is carefully considered, and the paper fair, the ink poor. The presswork is not so good as in the earlier volume.

A comparison of the productions of the Didots and of Baskerville convinces one that the Didots' contribution to typography was the most important of the eighteenth century.

The Supremacy of France and England, 1700-1800
Summary of Exhibits

No. 15. *Histoire générale des Voyages*. Vol. IV. Printed by François Didot at Paris in 1747.

Lent by the Boston Athenæum.

No. 16. *Œuvres de Fénelon*. Vol. I. Printed by François Ambroise Didot in Paris in 1787.

Lent by the Harvard College Library.

No. 17. Œuvres de Fénelon. Vol. IX. Printed by Pierre Didot, l'ainé, in Paris in 1792.

Lent by the Harvard College Library.

No. 18. Poésies de Boileau. Printed by Pierre Didot, l'ainé, in Paris in 1781. One of the Louvre editions.

Lent by the Harvard College Library.

No. 19. Specimen des Nouveaux Caractères de Pierre Didot, l'ainé. Printed in Paris in 1819.

Lent by a Member of The Society of Printers.

No. 20. La Gerusalemme Liberata. Vol. I. Printed by Pierre Didot, l'ainé, in Paris in 1820.

Lent by the Harvard College Library.

No. 21. Poetae Graeci Gnomici. Printed by Jules Didot in Paris in 1823.

Lent by the Harvard College Library.

No. 22. Quinti Horatii Flacci Opera. Printed by Firmin Didot in Paris in 1855. It shows the "microscopic" type.

Lent by the Harvard College Library.

No. 23. Two sheets showing the "brilliant" size of Henri Didot's "microscopic" types.

Lent by a Member of The Society of Printers.

No. 24. Publii Virgilii Maronis Bucolica, etc. Printed by John Baskerville in Birmingham in 1757.

Lent by a Member of The Society of Printers.

No. 25. Quintus Horatius Flaccus. Printed by John Baskerville in Birmingham in 1770.

Lent by the Harvard College Library.



MODERN BOOK-PRINTING

c. 1800-1905

THOUGH the division of printing into periods is more or less arbitrary, modern book-printing is here considered as beginning with the introduction of the so-called "modern-faced" types; roughly speaking about 1800. During the last part of the eighteenth century the Old Style Caslon forms of type became more and more refined, — a progression shown in the specimen sheets of Baskerville and of Moore of Bristol, who afterward became foreman to the Frys, and in such types as were used by Bulmer at The Shakespeare Press (see Dept. B, under Bulmer).

An impetus to the use of very light type had been given by the delicate engraved work of Thomas Bewick as early as 1780. Meanwhile in Italy, Bodoni of Parma; in France, Didot; and in England and Scotland, Whittingham and Constable, were all working on the same lines. In 1811, when Didot cut his modern types on a point system, based on metric measurements, this fashion was well under way. The weakness of much of this type was, however, soon felt; the reaction from which may be seen in the exaggerated black types cut by Jacquemin in 1818 and the ugly variations of them cut at London in the same year. In 1844 a sounder taste was encouraged by the return to the old-face fonts by The Chiswick Press, which in the "Diary of Lady Willoughby" reintroduced these admirable types to the booklover. From that time to the present day, excellent work has been done in these types by all the leading presses; and in the best of the "modern-faced" type under the name of Scotch-face — a revival

abroad due chiefly to Constable and other printers in Scotland and to one or two Presses in this country.

In 1891 a marked influence was felt from the books which William Morris began to print at The Kelmscott Press, Hammersmith (1891-1898). His types, designed and cut especially for his books, together with the illustrations and decorations, designed by and for him, the hand-made paper which he adopted, and the hand presswork by which the books were executed taught certain lessons of harmony and unity to printers which are, perhaps, his most valuable contribution to printing as an art. At the time of his death considered the leading printer of the period, a retrospect of ten years has placed him rather with those great decorators who have turned their attention to the printed book. The work of his Press has been followed by numbers of experiments in the cutting and designing of special types, both English and American, many of which have been eminently successful; and during the last few years the somewhat Gothic feeling of the Kelmscott Press books has been slowly abandoned for the lighter and more classical styles of type founded on Italian models of the fifteenth century,—a movement in which The Doves Press, London, has been chiefly instrumental, ably seconded by several American and English printers and designers. The influence of these English Presses has been, however, very strongly felt in America *in all classes of work*, indeed more strongly than in England, where their influence is much more limited. The mass of American commercial book-printing still remains inferior to the English printing of the same class, which for beautiful, readable, and sober volumes holds pre-eminence at the present moment; though that country has not produced as yet any one volume *on printing* so magnificent as is the "Histoire de l'Imprimerie en France," by Claudin, printed at the national French printing-house.

I-6. STAMPERIA REALE, PARMA

GIAMBATTISTA BODONI (1740-1813), the celebrated director of this Press, issued his first volume as early as 1768. But the character of Bodoni's types and the effect of his books are distinctly of the modern school in printing. This Press became known throughout Europe for the brilliancy of its work; it was visited by all the notables of the day who were making the "grand tour"; and at Bodoni's death he was, in public estimation, the first typographer of his time. His extraordinary collection of Roman, Greek, and "exotic" types was probably unequalled, and his "Manuale Tipografico," completed by his widow in 1818, is one of the very finest specimen books extant.

He printed in Greek, Latin, Italian, French, Russian, German, and English—Walpole's "Castle of Otranto" (1791), Gray's Poems (1793), and Thomson's "Seasons" (1794) being among the English books. He died, after a life full of honors, at Parma in 1813.

In connection with this exhibition the following letter is of interest:

PHILADELPHIA, Oct. 14, 1787.

SIR: I have had the very great pleasure of receiving and perusing your excellent *Essai des Caractères de l'Imprimerie*. It is one of the most beautiful that Art has hitherto produc'd. I should be glad to see a specimen of your other Founts besides this Italic & Roman of the Letter to the Marq^e. de Cubières; and to be inform'd of the price of each kind. — I do not presume to criticise your Italic Capitals; they are generally perfect: I would only beg leave to say, that to me the form of the T in the word LETTRE of the Title Page seems preferable to that of the T in the word Typographie in the next Page, as the downward stroke of T, P, R, F, B, D, H, K, L, I, and some others, which in writing we begin at the top, naturally swells as the pen descends; and it is only in the A and the M and N that those strokes are fine, because the pen begins them at the bottom. With great esteem I have the honour to be, M. BODONI,

Sir, Your most obedient & most humble servant,

B. FRANKLIN

No. 1. La Giuditta. Bodoni, Parma. 1813.

Lent by a Member of The Society of Printers.

No. 2. In Morte del Cavaliere Giambattista Bodoni Sommo Tipografo Avvenuta. Parma. 1814.

Lent by a Member of The Society of Printers.

No. 3. Brief of Pope Pius VI. to Bodoni. Parma. 1792.

Lent by a Member of The Society of Printers.

One of the twelve copies printed of the brief of Pius VII., complimenting Bodoni on his work. This was accompanied by two medals from the Pope — one of gold and one of silver. When the Pope saw the form in which Bodoni had printed this brief, he said to the bearer of it, who had presented it to him in the name of Bodoni, "Now one wishes for another brief to praise the first one."

This copy was formerly the property of A. A. Renouard, author of "Annales de l'Imprimerie des Alde."

No. 4. Oratio Dominica in CLV Lingvas versa et Exoticis Characteribvs Plervmqve Expressa. Bodoni, Parma. 1806.

Lent by a Member of The Society of Printers.

This book was dedicated to Eugène Beauharnais, viceroy of Italy; and this particular copy was given by him to Firmin Didot, January 20, 1809, as will be seen by the autograph inscription, in Didot's hand, facing the titlepage.

No. 5. Anacreon. Bodoni, Parma. 1791. One of the rarest of Bodoni's productions.

Lent by a Member of The Society of Printers.

No. 6. Callimachus. (In Greek and Italian.) Bodoni, Parma. 1792. Shows Bodoni's Greek types.

Lent by a Member of The Society of Printers.

**7-10. THE SHAKESPEARE PRINTING OFFICE
(WILLIAM BULMER), LONDON**

WILLIAM BULMER was born at Newcastle-on-Tyne, and early formed a friendship with Thomas Bewick. After an apprenticeship in Newcastle, he went to London, and with the help of Boydell and of Nicols, Librarian to George III., established the Shakespeare Printing Office under the style of W. Bulmer & Co. There he issued the famous Boydell Shakespeare (1794), a folio Milton, and in 1795 an edition of Goldsmith and Parnell's Poems,—a volume "particularly meant to combine the various beauties of printing, type-founding, engraving, and paper-making, as well as with a view to ascertain the near approach to perfection which those arts have attained in this country." Bulmer's ornaments were engraved by Bewick, his paper made by Whatman. Among his other publications were Dibdin's "Bibliographical Decameron" and Claude's "Liber Veritatis." Bulmer retired from business in 1819, and died eleven years later. This somewhat full notice of this Press is given as an interesting reminder that, at a period certainly not generally associated with fine book-making, serious efforts were made in that direction which met with appreciation and success.

No. 7. Poems of Goldsmith and Parnell. London, W. Bulmer. 1795. A special effort was here made to produce a perfect book. The types were cut by George Martin. The illustrations are the work of the Bewicks. (See note on Bulmer.)

Lent by the Boston Public Library.

No. 8. The Chase. By William Somerville. With illustrations designed and cut by Bewick. London, W. Bulmer. 1796. Shows Bulmer's typography in relation to illustrations.

Lent by a Member of The Society of Printers.

No. 9. Dramatic Works of Shakespeare. Folio Edition. London, W. Bulmer, Shakespeare Printing Office. 1802. To be examined for its brilliant presswork and typography in the taste of the day. The types in general effect resemble Baskerville.

Lent by the Boston Public Library.

No. 10. Bibliographical Decameron. By T. F. Dibdin. W. Bulmer, Shakespeare Printing Office, London. 1817. A "book-lover's book" of the first part of the nineteenth century.

Lent by the Boston Public Library.

11-13. LEE PRIORY PRESS, ICKHAM, ENGLAND

IN 1813 this Press was established at Ickham, near Canterbury, by Sir Egerton Brydges. It produced some rather interesting volumes. The compositor for this Press was John Johnson, author of "Typographia, or the Printer's Instructor" (1824).

No. 11. Excerpta Tudoriana. Lee Priory Press, Ickham, England. [c.] 1813. The borders and general effect show the influence of Bodoni and Didot.

Lent by the Boston Public Library.

No. 12. Dunluce Castle. Lee Priory Press, Ickham, England. 1814.

Lent by the Boston Public Library.

No. 13. The Brother-in-Law. A Comedy. Lee Priory Press, Ickham, England. 1817.

Lent by the Boston Public Library.

14-16. THOMAS BENSLEY, LONDON
(and R. ACKERMANN, LONDON)

THIS printer carried on an office in London in the early years of the nineteenth century, and his chief productions were Macklin's Folio Bible, Hume's "History of England," and an octavo Shakespeare. He will be chiefly remembered, however, for the letterpress of those volumes, with charming colored illustrations, published by Rudolph Ackermann, who established artistic lithography in England. Bensley died about 1833. His work represents the output of the substantial printer of the period. It is interesting to note that his printing office was in Bolt Court, Fleet Street, near the lodgings occupied by Dr. Johnson.

Nos. 14-15. Microcosm of London. Printed by T. Bensley for Ackermann. London. 1808-11. The architectural portion of the plates of this book was designed by the elder Pugin (1762-1832), and the figures by Rowlandson (1756-1807).

No. 16. Antiquities of Westminster Abbey. Ackermann, London. 1812. Showing Ackermann's lithographic work.

17-26. THE CHISWICK PRESS, LONDON

THIS Press is famous in the annals of English typography, the soundest traditions of which it has consistently upheld for over a century. It was founded by Charles Whittingham (b. 1767) about 1810 and was first started at Chiswick. He continued the work of this Press until his death in 1840. His nephew Charles Whittingham was associated with him from 1824 to 1830, but in 1828 he established himself in the premises occupied by Valpy at Tooks Court, Chancery Lane. Here he began to print for Pickering. He succeeded to his uncle's business in 1840, and carried on both establishments. On his death, the business became the property of his sons. After 1876 this Press passed into the hands of Mr. George Bell, the publisher, though still retaining the Whittingham name. The present manager, Mr. C. T. Jacobi, is known as the author of several useful books on typography.

It was at The Chiswick Press that the use of the old-face Caslon type was revived in 1843 in "The Diary of Lady Willoughby"; a revival followed by printers throughout England. The volumes in sexto-decimo and octavo printed for William Pickering are perhaps the most characteristic productions of this Press—charming little volumes, which for utility and beauty have not been surpassed in modern times. The splendid series of black letter Prayer Books, the octavo Milton, Taylor, Herbert, and the British Poets are all worthy of study. The decorations of many of these books were designed and cut on wood by Whittingham's niece, Mary Byfield. Of late years, by its excellent work for Messrs. Bell and many other publishers, this Press has maintained its place in the first rank of English printing-houses.

EMBLEM: *A lion holding a shield, on which is an Aldine anchor and dolphin.*

No. 17. Breviarium Aberdonense. Printed by Whittingham for The Bannatyne Club. London. 1854. Fine specimen of liturgical printing.

Lent by the Boston Public Library.

No. 18. Sallust. Pickering, London. 1863. Printed by C. Whittingham, Took's Court. London.

Lent by a Member of The Society of Printers.

No. 19. Book of Common Prayer of 1662. London, Pickering. 1844. One of a series of folio Prayer-books printed at the Chiswick Press for Pickering. Initials and borders are cut on wood.

Lent by the Boston Public Library.

No. 20. Diary of Lady Willoughby. London. 1844. Printed at the Chiswick Press by Whittingham, in Caslon Old Style type — a revival in the use of these types after many years of disuse.

Lent by the Boston Public Library.

No. 21. Table-Talk of John Selden. London, Pickering. 1847. One of the 16mo volumes printed at the Chiswick Press for Pickering.

Lent by a Member of The Society of Printers.

No. 22. Milton's Works (8 vols., octavo). London, Pickering. 1851. Printed by Whittingham.

Lent by a Member of The Society of Printers.

No. 23. Poems of Henry King. London, Pickering. 1843. A 16mo volume of poetry printed by Whittingham.

Lent by a Member of The Society of Printers.

No. 24. Bacon's *Novum Organum*. Printed for Pickering by C. Whittingham. 1850. Shows decorative titlepage of one of the Chiswick Press volumes.

Lent by a Member of The Society of Printers.

No. 25. Anthony Van Dyck. By Lionel Cust. Bell, London. 1900. A modern Chiswick Press book.

Lent by the Boston Public Library.

No. 26. Walton's *Lives*. New York, Scott-Thaw Co. 1904. A good example of modern work from the Chiswick Press, London.

Lent by a Member of The Society of Printers.

27-28. THE DANIEL PRESS, OXFORD

THE books issued under this imprint are arranged and printed by Rev. C. H. O. Daniel, Provost of Worcester College, Oxford, from the well-known Fell types (presented to The University Press by Dr. Fell, Bishop of Oxford before 1687) secured by Dr. Daniel for this purpose.

PRINTER'S MARK: *A figure of Daniel and a lion, with the motto "Misit Angelum Suum" (He sent his angel).*

No. 27. *Songs*. By Margaret L. Woods. Daniel Press, Oxford. 1896.

No. 28. *Fancy's Following*. Anon. Daniel Press, Oxford. 1896.

29-31. THE UNIVERSITY PRESS (CLARENDON PRESS) OXFORD

THE University Press began its printing in 1585, and as early as 1629 some Greek matrices had been given

to it by Sir Henry Savile. Its charter was granted in 1682 and a few years later this charter was enlarged by the privilege of printing Bibles. Already aided by Archbishop Laud, in 1666-72 a valuable gift of matrices, largely Dutch in origin, was made by Dr. Fell, then Dean of Christ Church, and later Bishop of Oxford — the Dr. Fell of Shakespeare's rhyme. Of late years the use of these beautiful Fell types has been revived with great success.

Typesetting began there as early as 1667; and about the same time Dr. Fell promoted the establishment of the paper-mill at Wolvercote — an establishment now owned by the University, where the beautiful Oxford India paper is made. The first "specimen" of type published in England was issued from this Press in 1693. In 1713 the Clarendon Building began to be utilized as a printing office. This building (designed by Vanbrugh, who built Blenheim) was so called because partly built from the copyright profits of Clarendon's "Rebellion," which are the property of the University. The Press was formerly in two departments, the Bible Press and the Learned or Classical Press. But in 1883 these were united under the management of Mr. Horace Hart, the present controller.

EMBLEM: *The arms of the University of Oxford.*

MOTTO: *Dominus Illuminatio Mea (God is my light.)*

No. 29. Early English Printing-types. By E. Gordon Duff. London. 1896. Printed at the University Press, Oxford, from the Fell types.

Lent by a Member of The Society of Printers.

No. 30. Oxford Book of English Verse. Clarendon Press, Oxford. 1901. Showing use of Fell types.

Lent by a Member of The Society of Printers.

No. 31. Coronation Prayer Book. University Press, Oxford. 1902.

Lent by a Member of The Society of Printers.

No. 31 a. Oxford Caxton Memorial Bible. Printed (from type) and bound in 12 hours. It contains 1052 pages and 101 persons were employed upon it. Oxford. 1877.

32-35. THE KELMSCOTT PRESS, HAMMERSMITH (LONDON)

THIS famous Press was started by the late William Morris (1834-1896) in the year 1890. For it he designed three fonts of type, the Golden, Troy, and Chaucer, and an immense number of borders and initials — of which the blocks were deposited after his death in the British Museum. Between April, 1891, and March, 1898, fifty-three books were produced. His Chaucer (1896) is generally considered the great achievement of this Press, which has had a most potent influence on printing as an art. [*See also notice on "Modern Printing" above.*]

No. 32. Works of Geoffrey Chaucer. Kelmscott Press, Hammersmith. 1896. The pictures are engraved on wood after designs by Sir Edward Burne-Jones; the borders and initials are by William Morris; and the type is the "Chaucer," a variant of the Troy font. It is considered the masterpiece of this Press.

Lent by the Boston Public Library.

No. 33. Chronicles of Fraunce. By Sir John Froissart. Trial pages on vellum. Kelmscott

Press, Hammersmith. 1897. Owing to the death of Mr. Morris, this work was never completed.

Lent by the Boston Public Library.

No. 34. Recuyell of the Hystories of Troye. By Raoul le Fevre. Translated by William Caxton. Kelmscott Press, Hammersmith. 1892. This shows Mr. Morris's Troy type. The decorations are by Mr. Morris.

Lent by the Boston Public Library.

No. 35. The Golden Legend of J. de Voragine. Translated by William Caxton and edited by F. S. Ellis. Kelmscott Press, Hammersmith. 1892. This shows William Morris's Golden type, and the decorations are also his.

Lent by the Boston Public Library.

36-38. THE VALE PRESS, LONDON

THE Vale Press, the labors of which are now brought to a close, is not in the strict sense a Press at all, but a name applied to that output of The Ballantyne Press which was executed under the direction of Charles Ricketts and printed from type, and with decorations, designed by him. Its work is more classical in feeling than that of Morris, and less severely classical than that of The Doves Press. The decorative designs employed are generally most admirable and the books are always interesting. Mr. Ricketts' font of Vale type (in two sizes) has been used in most of these publications. The Kings font, a newer venture, though based upon very early models, can scarcely be called satisfactory to the average eye. Mr. Ricketts has here reverted to half uncial forms and discarded some letters in favor of an earlier type of letter.

No. 36. Bibliography of the Vale Press. London. 1904. A page showing the King's font, designed by C. Ricketts.

Lent by the Boston Public Library.

No. 37. De la Typographie et de l'Harmonie de la Page Imprimée. William Morris et son Influence sur les Arts et Métiers. Vale Press (Ballantyne Press). 1898. Printed in Vale type, showing arrangement of rules and florets by Mr. Ricketts.

Lent by a Member of The Society of Printers.

No. 38. The Rowley Poems. By Thomas Chatterton. Vale Press, London. 1898. (2 vols.)

Lent by Harvard College Library.

39-41. THE DOVES PRESS, HAMMERSMITH, LONDON

THIS small but most distinguished Press has achieved, after The Kelmscott Press, the highest reputation in England among the so-called private presses, and to it, indeed, may be said to have descended the mantle of Morris. Mr. Emery Walker, by whose taste and practical knowledge much of Mr. Morris's work was made possible, and Mr. Cobden-Sanderson, chief of the Doves Bindery, are the owners of this Press. They have designed for it the admirable type based on that of Nicolas Jenson, in which all books published by them have been printed. The Doves Press has had great influence in directing the taste of the booklover from the somewhat heavily decorated books of Morris to the simpler and sounder beauties of severely elegant type, elegantly disposed, upon paper which in quality and proportion leaves little to be desired.

No. 39. The English Bible. Doves Press, Hammersmith. 1903. Showing a page of prose. This book is considered the great achievement of this Press. It is among the most beautiful of modern books.

Lent by a Member of The Society of Printers.

No. 40. The English Bible. Doves Press, Hammersmith. 1904. Showing a page of poetry with rubricated initials.

Lent by a Member of The Society of Printers.

No. 41. The Ideal Book. By T. J. Cobden-Sanderson. Doves Press. 1900.

42-44. THE ASHENDENE PRESS, (CHELSEA) LONDON

THIS Press, which has been called "the serious plaything of Mr. Hornby and his family," is the property of Mr. C. H. St. John Hornby. Its first book was printed in 1894. All the books are printed on a hand-press, on hand-made paper, with strong black inks, by Mr. Hornby himself, with one assistant; although his wife and sister have aided him in his work at the Press. The number of his books is not great, but they are marked by a distinction and beauty of typography and presswork which is above praise. In them the taste and spirit of the amateur is combined with professional excellence of workmanship. Mr. Hornby has used in his books an interesting form of Gothic type, of which a specimen is shown.

Nos. 42-43. Dante's Inferno (1902) and Purgatorio (1904). Ashendene Press, London. Printed

by St. John Hornby and Cicely Hornby, showing Ashendene type. Initials are by hand.

Lent by Charles Eliot Norton, Esq.

No. 44. Fioretti di San Francesco di Assisi. Ashendene Press, London. 1901. Showing Ashendene types. Illustration is cut on wood.

Lent by a Member of The Society of Printers.

45-46. MODERN GREEK TYPES

THE following fonts of Greek types are indicative of the recent revival of interest in types and printing:

No. 45. Macmillan fonts of Greek type designed by Selwyn Image. (2 sizes.) The New Testament, 1895.

Lent by a Member of The Society of Printers.

No. 46. Robert Proctor's font of Greek type. Oresteia of Aeschylus, 1904.

Lent by a Member of The Society of Printers.

47-48. THE ERAGNY PRESS, EPPING, ESSEX, ENGLAND, AND THE BROOK, HAMMERSMITH, LONDON

THIS Press, which represents all that is most modern in the English revival under Morris, is presided over by Esther and Lucien Pissarro. The ornaments and illustrations are drawn by Mr. Pissarro and engraved on wood by Esther Pissarro. The first sixteen books published have been printed in the Vale type lent by its designer, Mr. Charles Ricketts. The latest books are printed in the Brook type, designed by Mr. Pissarro himself.

NAME: *From Eragny in Normandy.*

PRESSMARK: *A woman seated holding a book inscribed Eragny Press; above a ribbon with the words E. and L. Pissarro, London.*

No. 47. *Les Petits Vieux*. Eragny Press, London. 1901. Printed in Vale type, with illustrations printed in color, from woodblocks cut by Esther Pissarro.

Lent by a Member of The Society of Printers.

No. 48. *A Brief Account of the Origin of the Eragny Press, etc.* The Eragny Press, London. 1903. The first book printed in Mr. Pissarro's Brook type.

Lent by a Member of The Society of Printers.

49-51. THE ESSEX HOUSE PRESS, CHIPPING CAMPDEN, GLOUCESTERSHIRE, ENGLAND

THE Essex House Press is, if we are not mistaken, a department of the Guild of Handicraft. Mr. C. R. Ashbee is the director of this Press. It was founded in 1898 and it has produced a number of books. Formerly in London, it is now at Chipping Campden, Gloucestershire. Mr. Ashbee has designed for the Press the "Essex House" type in which many of its later books have been printed.

EMBLEM: *A pink.*

No. 49. *Wren's Parentalia*. Essex House Press, London.

Lent by the Boston Public Library.

No. 50. *Prayer Book of Edward VII.* Essex House Press, London. Showing Mr. Ashbee's "Essex House" type.

Lent by a Member of The Society of Printers.

No. 51. *Pilgrim's Progress*. Essex House Press, London. 1899.

52. IMPERIAL PRESS, CLEVELAND, OHIO

THIS Press is no longer in existence. The attractive little volume shown is arranged by Mr. George French, formerly connected with the Imperial Press. Mr. French's contributions to the literature of typography are familiar to those interested in the history and practice of the art.

No. 52. Printing in Relation to Graphic Art. By George French. (One of 15 copies printed on Japan paper.) 1903.

53-56. THE VILLAGE PRESS, HINGHAM, MASS.

THIS interesting little Press was started in the village of Park Ridge, Illinois, by F. W. Goudy and W. H. Ransom; Mr. Goudy acting as designer and Mr. Ransom as compositor. Later Mr. Ransom's interests were transferred to Mrs. Goudy, who has since then learned to set type. She undertakes the composition of The Village Press books; the presswork being done by hand by Mr. Goudy.

In 1904 the Press was removed to Hingham, Mass. For it Mr. Goudy has designed the Village type, modelled somewhat upon Mr. Morris's Golden font, and in this type ten books have been issued.

No. 53. Lamb's Dissertation upon Roast Pig. Village Press, Hingham, Mass. Set in "Village" type. 1904.

No. 54. Printing. By William Morris and Emery Walker. Village Press, Hingham. Set in "Village" type. 1903.

No. 55. The Hollow Land. By William Morris. Village Press, Hingham, Mass. Set in "Village" type. 1905.

No. 56. Original drawing of "Village" type. By F. W. Goudy.

57-64. THE RIVERSIDE PRESS, CAMBRIDGE

THE Riverside Press, which is the printing-house of the firm of Houghton, Mifflin & Company, was established by the late Mr. Henry O. Houghton of Vermont in 1852, and from that day to this has held a place in the first rank of American Presses. Its situation upon the bank of the Charles in Cambridge gives it its name. The quality of its work in the past is shown by the editions of Bacon and of Burton's "Anatomy of Melancholy," which were achievements of importance at the time they were produced. During the last five years a special department for the printing of fine books—the "Riverside Press Editions"—has been established, under the charge of Mr. Bruce Rogers, which has produced some of the best and most attractive volumes made in this country. Mr. Rogers, whose work shows him to be a careful student of early typography and design, has arranged both type and decorations for these books, many of the latter being cut upon wood. He has also designed a special face of type—the Montaigne—used with great success in the monumental edition of Montaigne in folio published a year or two ago. His work in this department has also been reflected in the other publications of this house, which for consistent and sensible books stands in the front rank.

EMBLEM: *A youth playing on pipes.*

MOTTO: *Tout bien ou rien (If you do it, do it well).*

No. 57. Boccaccio's Life of Dante. Houghton, Mifflin & Co., Boston. 1904.

No. 58. Essays of Montaigne. (3 vols.) Folio. Houghton, Mifflin & Co., Boston. 1903.

No. 59. Chaucer's Parlement of Foulys. Houghton, Mifflin & Co., Boston. 1904.

No. 60. Fifteen Sonnets of Petrarch. Houghton, Mifflin & Co., Boston. 1903.

No. 61. Sonnets and Madrigals of Michelangelo. Houghton, Mifflin & Co., Boston. 1900.

No. 62. The Georgics of Virgil, translated by J. W. Mackail. Houghton, Mifflin & Co., Boston. 1904.

No. 63. The History of Oliver and Arthur. Houghton, Mifflin & Co., Boston. 1904.

No. 64. The Declaration of Independence—Broadside. Printed at the Riverside Press, 1905. [Hung on wall.]

Lent by a Member of The Society of Printers.

65-67. THE ELSTON PRESS, NEW ROCHELLE, N. Y.

MR. Clarke Conwell is the proprietor of this Press, which began its work in the summer of 1900; the first book being issued in December of the same year. About twenty-five books have been issued by Mr. Conwell which, among their other merits, are remarkable for beauty and evenness of presswork, which is entirely done by hand. The workmanlike qualities of these books are a rebuke to much of the ill-performed work which masquerades as "artistic."

No. 65. The Cenci. Elston Press, New Rochelle. 1903. Showing hand-presswork. The text is set in a Caslon "Old Roman" font.

Lent by Mr. Clarke Conwell.

No. 66. Daphnis and Chloe. Elston Press, New Rochelle. 1904.

Lent by Mr. Clarke Conwell.

No. 67. Selections from the Hesperides of Her-
rick. Elston Press, New Rochelle. 1903.

Lent by Mr. Clarke Conwell.

68-76. THE UNIVERSITY PRESS, CAMBRIDGE, MASS.

THIS old established Press, dating from 1639, barring a break between the years 1701 and 1761, during which period no printing was done in Cambridge, has an honorable heritage in its traditions of scholarship and accuracy of printing. An older generation will remember the high standard of Messrs. Welch, Bigelow & Company, so consistently and faithfully carried on by the well-known firm of John Wilson & Son. The present corporation, The University Press, John Wilson & Son, is in no sense behind these earlier firms in its efforts after typographical perfection — efforts shown in the work of Mr. William Dana Orcutt, its vice-president, and also in its monthly publication, "The Printing Art," edited by Mr. Henry Lewis Johnson. Its imprint will be found upon a wide variety of well-printed books, produced for all the leading publishers in this country, and for many in England, Scotland, and Italy. Its exhibit shows the versatility of its powers.

It is an interesting fact that the first Adams press and the first stop-cylinder press made by Hoe were used in this printing-house.

No. 68. Artist's Way of Working. By Russell Sturgis. Dodd, Mead & Co. 1905. Printed by The University Press, Cambridge. Showing combination of half-tones and letterpress.

No. 69. Princess Kallisto. By William Dana Orcutt. Little, Brown, & Co. 1903. Printed by The University Press, Cambridge. Showing the possibility of securing watercolor effects in children's books.

No. 70. Ad Astra. R. H. Russell. 1902. Printed by The University Press, Cambridge. Showing combination of line decoration and letterpress.

No. 71. Old Creole Days. By G. W. Cable. Charles Scribner's Sons. 1898. Printed by The University Press, Cambridge. Showing combination of photogravure headpiece and initial with type.

No. 72. Robert Cavelier. By William Dana Orcutt. A. C. McClurg & Co. 1904. Printed by The University Press, Cambridge. A "trade" novel, showing heading and initial lettering.

No. 73. The Caxton Club Scrap-Book. Caxton Club, Chicago. 1905. Printed by The University Press, Cambridge. Showing a typical book of poetry.

No. 74. *House of Life*. By D. G. Rossetti. Copeland & Day. 1899. Printed by The University Press, Cambridge.

No. 75. *Ruling Cases*. Boston Book Co. 1903. Printed by The University Press, Cambridge. A typical law page, representing a side of printing with which the Press has long been identified.

No. 76. *Humphrey Clinker*, by Tobias Smollett. George D. Sproul. 1902. Printed by The University Press, Cambridge. Regular novel work, on hand-made paper.

77-79. THE MT. PLEASANT PRESS, HARRISBURG, PENNSYLVANIA

THE J. Horace McFarland Company are the proprietors of this Press, and Mr. J. Horace McFarland is its manager. Its product shows diverse examples of the book-work demanded of a modern establishment devoted to general "outdoor" printing — including reference works and text-books. In many of the volumes the illustrations, as well as the design and printing, have originated at the Press.

EMBLEM: *A four-leaf clover.*

No. 77. *A Woman's Hardy Garden*. By Helena R. Ely. Macmillan. 1902. Printed at the Mt. Pleasant Press, Harrisburg.

Lent by J. H. McFarland.

No. 78. *Seen* by The Spectator. New York, The Outlook Co. 1902. Printed at the Mt. Pleasant Press, Harrisburg.

Lent by J. H. McFarland.

No. 79. Getting Acquainted with the Trees. By J. H. McFarland. New York, The Outlook Co. 1904. Printed at the Mt. Pleasant Press, Harrisburg.

Lent by J. H. McFarland.

80-82. THE MCCLURE PRESS, NEW YORK

THE typography of these books is arranged by Mr. W. A. Bradley for McClure, Phillips & Co., New York. His work is interesting, in that he applies, in the making of the "trade" volume, the taste and care which, until recently, was only to be found in the expensive book.

No. 80. The Gospel of Life. By Charles Wagner. McClure, Phillips & Co., New York. 1905.

Lent by a Member of The Society of Printers.

No. 81. The Rose of Joy. By Mary Findlater. McClure, Phillips & Co., New York. 1902.

Lent by a Member of The Society of Printers.

No. 82. Shakespeare's Henry V. Acting Version of Richard Mansfield. McClure, Phillips & Co., New York.

Lent by a Member of The Society of Printers.

83-89. THE GILLISS PRESS, NEW YORK

THE Gilliss Press, managed by Messrs. Gilliss Brothers, began its work in 1869, as the venture of two brothers, Thomas and Walter Gilliss. In 1884 Mr. Arthur Turnure became a partner, and the style of the house became Gilliss Brothers & Turnure. This partnership terminated in 1890. In 1902 the firm became incorporated as The Gilliss Press. It has achieved much

reputation for the care and delicacy with which its work is turned out. Its typography has been especially noteworthy in connection with the engraved and photogravure decorations, which have been features of its most important books. The limited editions of the books of William Loring Andrews, and some of its issues for The Grolier Club, are familiar to all American book-lovers.

EMBLEM: *A shield, crowned, within a collar of spirals and cocklesbells.*

MOTTO: *Le Minuzie fanno la Perfezione ma la Perfezione non è una Minuzia (Trifles make perfection, but perfection is no trifle).*

No. 83. Gossipabout Book-collecting. By W. L. Andrews. Dodd, Mead & Co., New York. 1900. (2 vols.) Printed at the Gilliss Press.

Lent by Gilliss Brothers, New York.

No. 84. Paul Revere and His Engraving. By W. L. Andrews. Charles Scribner's Sons, New York. 1901. Printed at the Gilliss Press. With engravings by French.

Lent by Gilliss Brothers, New York.

No. 85. Fishing with an Angle. New York, Scribner. 1903. Printed at the Gilliss Press.

Lent by Gilliss Brothers, New York.

No. 86. Bibliopeggy in the United States. By W. L. Andrews. Dodd, Mead & Co. 1902. Printed at the Gilliss Press.

Lent by Gilliss Brothers, New York.

No. 87. Pictures of Early New York on Staffordshire Pottery. By R. F. H. Halsey. New York, Dodd, Mead & Co. 1899. Printed at the Gilliss Press.

Lent by Gilliss Brothers, New York.

No. 88. *Sextodecimos et Infra*. By W. L. Andrews. Charles Scribner's Sons, New York. 1890. Printed at the Gilliss Press.

Lent by Gilliss Brothers, New York.

No. 89. *The Story of a Motto and a Mark*. By Walter Gilliss. Printed in 1902 at the Gilliss Press.

Lent by Gilliss Brothers, New York.

90-91. THE MARION PRESS, JAMAICA, QUEENSBOROUGH, LONG ISLAND, N. Y.

THIS Press was founded in 1890 by Mr. F. E. Hopkins (its owner), formerly of The De Vinne Press, New York. Though limited in its output, its scholarly and careful work has from its start commended it to the conservative booklover; and it deserves special attention for the great beauty and delicacy of its presswork.

EMBLEM: *A book held open by two hands.*

No. 90. *Catalogue of Hasty Pudding Club*. Marion Press, Jamaica, L. I. 1902. Showing the delicate presswork for which this Press is known.

Lent by a Member of The Society of Printers.

No. 91. *Sonnets*. By William R. Huntington, D.D. Marion Press, Jamaica, L. I. 1899.

Lent by a Member of The Society of Printers.

Other books received too late for insertion in Catalogue. This exhibit is marked by cards laid in the case where the books are displayed.

92-96. THE DE VINNE PRESS, NEW YORK

THIS well-known Press, until very recently presided over by Theodore L. De Vinne, the *doyen* of American

printers, has achieved a great reputation for its careful work — especially its magnificent presswork. Its founder has long been the chief authority in the United States on matters pertaining to printing, and has rendered great service to typography, by his series of learned books about printing and by the high standard set by his work to the whole body of American printers. Many of the publications of The Grolier Club, New York, are the work of this Press. Mr. De Vinne is the author of "The Invention of Printing" (1876), "Historic Types" (1884), "Christopher Plantin" (1888), "Plain Printing Types" (1900), "Correct Composition" (1901), "Title Pages" (1902), "Book Composition" (1904). He is one of the founders of, and now president of, The Grolier Club. He has practically retired from business, and the printing-house is now managed by the junior partner, Theodore Brockbank De Vinne.

No. 92. The History of Helyas, Knight of the Swan. New York, The Grolier Club. 1901. Printed at The De Vinne Press.

Lent by Theodore L. De Vinne, Esq.

No. 93. Old English Masters. New York, Century Co. 1902. Printed at The De Vinne Press.

Lent by Theodore L. De Vinne, Esq.

No. 94. The Tragedie of Macbeth. New York Doubleday, Page & Co. 1903. Printed at The De Vinne Press.

Lent by Theodore L. De Vinne, Esq.

No. 95. An Essay on Colophons. By A. W. Pollard. Chicago, Caxton Club. 1905. Printed at The De Vinne Press.

Lent by Theodore L. De Vinne, Esq.

No. 96. *Brilliants*. Printed in 1905 at The De Vinne Press. A miniature volume in "brilliant" type.

Lent by Theodore L. De Vinne, Esq.

97-99. IMPRIMERIE NATIONALE, PARIS

THE French Government Printing Office was established in 1640 by Louis XIII., at the suggestion of Richelieu, although Royal Printers of Hebrew, Greek, and Latin had been appointed as early as 1538. The famous Greek types (*grecs du roi*) cut by Garamond for Francis I., as well as the splendid Roman and Italic types (*caractères de l'Université*, 1540), and those types cut by Grandjean and Alexandre (*types de Louis XIV.*), by Louis Luce (*types poetiques*, 1740), by François Didot (1812), by Marcellin-Légrand (1825, 1859), as well as the recent ones by Hénaffe (1902 and 1904) have all been cut for this establishment.

It has also a magnificent repertoire of about 158 fonts of oriental types, the earliest of which were acquired by Antoine Vitré. For many years occupying the historic Hôtel de Rohan, this Press is now to be removed to a new building, with more modern installations, at Grenelle. An interesting adjunct to this establishment is a laboratory for the testing of paper, and other materials employed in its work.

No. 97. *Histoire de l'Imprimerie en France*. By A. Claudin. Paris. 1900. Printed at the Imprimerie Nationale. Shows types cut by Garamond, about 1540. Probably the finest work on printing ever produced.

Lent by a Member of The Society of Printers.

No. 98. *Histoire de l'Imprimerie en France*. By A. Claudin. Paris. 1900. Printed at the

Imprimerie Nationale. Showing page with illustrations; types of Grandjean.

Lent by a Member of The Society of Printers.

No. 99. Debuts de l'Imprimerie en France. By A. Christian. Paris. 1905. Printed at the Imprimerie Nationale. Showing "Gothique" types cut by Hénaffe.

Lent by a Member of The Society of Printers.

100. IMPRENSA NACIONAL, LISBON

THE National Printing Office of Lisbon is presided over by Dr. Deslandes. The "Camoens" shown from this Press was published for the Paris Exposition of 1900.

No. 100. Camoens: Imprensa Nacional, Lisbon, 1900. The type used in this book was cut and cast at the National Printing-house of Lisbon.

Lent by Theodore L. De Vinne, Esq.

Of this volume Mr. De Vinne writes: "What I admire about the book is the simplicity of its typography, although it tends a little more to feminine delicacy than I like; but there is a clearness, sharpness, and precision about the type-work not often noticeable in modern *editions de luxe*. The designs for initial letters are simple and very good. Those made for head-bands and tail-pieces are not so good; but the presswork of these decorations in exactness of register and evenness of color is admirable. It is not the first time that an 'artist' has disfigured the type-work he has tried to improve. Note also that the type-work is wide leaded and thereby made more readable, although this practice is in opposition to some of our modern reformers of typography."

101. FRATELLI TREVES, MILAN

THIS firm stands among the more progressive of Italian publishers and printers.

No. 101. Francesca di Rimini. By Gabriele d'Annunzio. Fratelli Treves, Milan. 1902. Interesting as showing the influence of William Morris on Italian printing.

Lent by a Member of The Society of Printers.

102. T. & A. CONSTABLE, EDINBURGH

THIS firm stands in the first rank of Scotch printing-houses, and its imprint will be found on many of the best books issued in Great Britain. Mr. W. B. Laikie arranges the typographical work of this Press, and it is to his scholarship and taste that much of the beauty of its books is due. The revival of Scotch-face type was largely the work of Messrs. Constable, as is specially exemplified in the volumes of Mr. Nutt's Tudor Translations.

EMBLEM : *A ship.*

No. 102. Antwerp Delivered, in 1577. By Sir W. Stirling-Maxwell. Typography by T. & A. Constable, Edinburgh. 1878. A fine example of a luxurious book on hand-made paper. But note the lack of unity between type and decorations, characteristic of books of this period.

Lent by the Boston Public Library.

103. R. & R. CLARK, EDINBURGH

THIS well-known firm of Edinburgh printers produced, in the last quarter of the nineteenth century, a series of books for Sir William Stirling-Maxwell, which were among the finest volumes issued at that period. The Clark imprint will be found to-day upon numerous English books, all marked by the quiet good taste and that sense of the "suitable" characteristic of this house.

No. 103. Procession of Pope Clement VII. and the Emperor Charles V., etc. By N. Hogenburg. Edited by Sir W. Stirling-Maxwell. Typography by R. & R. Clark, Edinburgh. 1875. A fine specimen of typography in color.

Lent by the Boston Public Library.

**104-106. ISAIAH THOMAS,
WORCESTER, MASS.**

ALTHOUGH Franklin called Isaiah Thomas the "American Baskerville," his printing was not in itself remarkable, other than in the light of the period in which he worked and the difficulties which lack of good paper, good ink, and good workmen placed in his way. He was born in 1749, was trained for his trade in Fowle's printing office in Boston, and, after various adventures at Halifax and in North and South Carolina, returned to Boston in 1770. In July he issued the first number of "The Massachusetts Spy," which was so antagonistic to the British government that he incurred the anger of the authorities. In April of 1775 he quietly left Boston and a month or two later he settled in Worcester, where he remained until the end of his life. It was he who read to the people of Worcester on July 24, 1776, the Declaration of Independence, received in Worcester on that day by the hand of a post-rider. It may be added that he was appointed postmaster of Worcester by Franklin, who was the first postmaster-general. Thomas' chief work was a folio Bible published in 1791—the first folio Bible printed in America. Franklin, to whom Thomas presented a copy, expressed his great admiration for the work. Thomas was also the first printer of music from movable types in America and produced in them the "Worcester Collection of Sacred Harmony." He retired from business in 1802 and spent the next eight

years of his life in writing his history of printing, published in 1810. He was the founder of The American Antiquarian Society of Worcester and its first president. He died April 4, 1831.

No. 104. The Holy Bible, printed by Isaiah Thomas, Worcester, Mass. (2 vols.) 1791. The first folio Bible printed in America.

Lent by Harvard College Library, to which this copy was presented by Isaiah Thomas.

No. 105. Worcester Collection of Sacred Harmony, printed by Isaiah Thomas, Worcester, Mass. 1786. This book contains the first music printed from movable types in America.

Lent by the Harvard College Library.

No. 106. History of Printing in America. By Isaiah Thomas. (2 vols.) Worcester. 1810.

Lent by the Boston Public Library.

107-110. THE ATHENÆUM PRESS, BOSTON

THIS Press belongs to Messrs. Ginn & Company, the well-known educational publishers, who established their own Press in Boston as early as 1886. In 1895 they built The Athenæum Press, which has won a reputation for the high character of its product. Every process of manufacture is there represented, and enables the firm to give to the school world publications which modern life and modern methods demand.

No. 107. Northern Trails. By W. J. Long. Ginn & Co., Athenæum Press, Boston. 1905.

Lent by a Member of The Society of Printers.

No. 108. Advanced Algebra. By H. E. Hawkes. Ginn & Co., Athenæum Press, Boston. 1905.

Lent by a Member of The Society of Printers.

o. 109. Innuít Language. By F. Barnum.
n & Co., Athenæum Press, Boston. 1901.

ut by a Member of The Society of Printers.

o. 110. Graded Art Readers. By E. M. Cyr.
n & Co., Athenæum Press, Boston. (n. d.)

-118. THE MERRYMOUNT PRESS, STON

is Press was begun by its owner, Mr. D. B. Up-
; in a very modest way in 1893 with one compositor
a small hand-press. Slowly a composing-room was
unized and equipped, to which a pressroom was
ed in 1897 and enlarged in 1903. Besides an inter-
g collection of types and ornaments, two fonts of
e have been specially cut for this Press — the *Merry-*
nt, designed by Bertram Goodhue, and the *Mont-*
ro, designed by Herbert P. Horne. The aim of the
ss has been to undertake the work of to-day in the
it of the best days of printing.

ME : *Derived from the 17th century settlement of Thomas Morton, near
oston, Massachusetts.*

BLEM : *A Maypole.*

OTTO : *Optimum Fix Satis (The best is but good enough).*

o. 111. Minor Works of Tacitus. Boston.
B. Urdike. The Merrymount Press. 1904.
owing Merrymount type.

o. 112. Life of Michael Angelo. By A. Con-
i. Boston. D. B. Urdike, The Merrymount
ss. 1905. Showing Mr. Horne's Montallegro
e.

o. 113. Arcady in Troy. Privately printed.
e Merrymount Press. 1903.

No. 114. Works of Lamb (in 12 vols.). Pafraets Book Co., Troy. (n. d.) Printed at The Merrymount Press in Scotch-face type, first used in this country by this Press.

No. 115. Letters of Rhode Island Children. Privately printed. The Merrymount Press. 1904.

No. 116. True Love-Letters. Privately printed. The Merrymount Press. 1905.

No. 117. Dedication John Carter Brown Library, Providence. The Merrymount Press. 1905.

No. 118. The Holy Bible (in 14 vols.). R. H. Hinkley Co., Boston. 1904. The Merrymount Press.

All the above books were lent by a Member of The Society of Printers.

119. THE KIRGATE PRESS

MR. Lewis Buddy, III, was the manager of this Press, which is now, as a separate establishment, given up. Its imprint still appears, however, on volumes for the typographical arrangement of which Mr. Buddy is responsible. It takes its name from Kirgate, Horace Walpole's printer at Strawberry Hill. The publications of this Press are of serious interest to the student of typography and bibliography, to which subjects they are chiefly devoted.

Books arrived too late for insertion in Catalogue. This exhibit is marked by cards laid in case where books are displayed.

120. THE HEINTZEMANN PRESS, BOSTON

MR. C. H. Heintzemann's Press is well-known to Bostonians and to lovers of good printing at large, as one of the most progressive of to-day's commercial

Presses. The success of its decorative composition is owing to Mr. Heintzemann's own studious care and thought. His work in book-printing, though somewhat overshadowed by his own reputation in the more ephemeral work for which his Press is noted, is however, a solid and satisfactory accomplishment, ranking with the product of the best printing-houses in America.

Books received too late for insertion in Catalogue. Exhibit marked by cards laid in case where books are displayed.

121. THE PLIMPTON PRESS, NORWOOD, AND THE TROW PRINTING COMPANY, NEW YORK

THE books under these imprints are sent by Mr. A. F. Mackay, who superintended their making. Mr. Mackay is one of the progressive men in the printing world.

Books received too late for insertion in the Catalogue. This exhibit is marked by cards laid in the case where the books are displayed.

122. THE LAKESIDE PRESS, CHICAGO

MESSRS. R. R. Donnelley & Sons Company are the proprietors of this Press, which has produced some remarkably good pieces of printing. The Committee regret that owing to the lateness in hearing from this Press, no account of it can be given.

Books received too late for insertion in Catalogue. Exhibit marked by cards.

2

COMMERCIAL PRINTING

In this department are grouped exhibits of cards, announcements, and catalogue pages. The purpose is to show some of the types which may be regarded as standard displayed in well-balanced forms. The great variety of types offered, the constant effort for originality and for unusual effects have worked against the development of a high standard in this class of printing. The attention which has recently been given to the use of a single face of type in series, and the careful avoidance of over-display or eccentricity, have resulted in the production of interesting and attractive commercial printing.

The most widely used type face, both for text and display, is Caslon Old Style. This letter derives its name from an English typefounder, William Caslon, by whom it was shown first in a specimen sheet issued in 1734. The capitals, being slightly heavier than the majority of text letters, add color and accentuation when used in display. Printed upon antique wove or laid papers, the type gains in strength, so that it serves well for titlepages, running heads and display lines, advertisements and announcement forms. Many attractive titles, cards, and small forms are worked out successfully in Caslon capitals, either in panel form or in balanced display, producing results which are somewhat classical in effect.

Owing to the marked contrast in height between the capitals and lower case letters, this style of display has become a conspicuous feature. The exhibits contain numerous examples composed in Caslon Old Style, illustrating the different ways in which it is used.

Another type in which interest has been revived recently is Old Style Antique, a heavy faced Roman letter in which all of the elements are of uniform width. The use of this type is prominent in catalogue matter, pamphlets, and small announcement forms upon antique papers in which an effort is made for ecclesiastical style. In display the type is most commonly used in capitals and as a body letter in books, pamphlets, circulars, or announcements. The lower case makes a solid page, yet retains its legibility.

In connection with Caslon Old Style and other book faces, Priory and similar black letters are used for display in titlepages and headlines. They are also employed as headings for circulars and announcements set in regular body letters of Old Style Antique. Priory is often used for rubricated lines in ecclesiastical and decorative printing.

Gothic letters have been given over to architectural and scientific works as titles or for display, generally restricted to small sizes. The typographical emphasis so conspicuous a short time ago in advertisements and commercial forms, composed in gothics, has been superseded by the use of lighter faced types.

A variety of so-called private types and recent type-foundry faces have increased the resources for distinctive typographic work, much being produced which has grace in proportion and charm in the lines and color values in the types themselves.

The adoption of photo-mechanical processes of engraving has greatly increased the use of decorative design as a supplement to typography. The use of borders and decorative initials has been greatly increased by the work of William Morris and by the influence of other private presses under his influence. There has been a reaction from heavy black letters and rubrication, preference being given to lighter types having plain Roman characters.

simple decorative treatments, avoiding mediæval effects. The use of headings, borders, and symbolic devices appropriate to the subject matter now gives color and zest to many announcement and catalogue forms. The exhibits include several examples of this class of decorative printing.

The examples shown in this department are in the main simple forms selected for the purpose of displaying the different types, styles of design, papers, and other details indicative of the application of definite principles to commercial work, rather than to show elaborate ones which, however attractive, are not so fully representative.

Commercial Exhibits

Nos. 1-12. Circulars and announcement forms, composed in Caslon Old Style type. These show accentuation by the use of large capitals and different forms of display by use of capitals, small capitals, and italics. The tone and quality of the papers contribute much to the attractive quality of these examples. Printed by D. B. Updike, The Merrymount Press, Boston.

No. 13. Folder. The border line and slight rubrication combine to produce the dainty and pleasing effect of this example. Printed by D. B. Updike, The Merrymount Press, Boston.

No. 14. Order of Service pages. The symbolic devices in the border, types used, and rubrication give a distinct ecclesiastical style. Printed by The Gillis Press, New York.

No. 15. Circular, showing the introduction of a decorative device in the title. Printed by D. B. Updike, The Merrymount Press, Boston.

No. 16. Announcement form, in which rubrication and a large initial produce decorative quality. Printed by D. B. Updike, The Merrymount Press, Boston.

No. 17. Ecclesiastical letter, composed in Old Style Antique, with colored initial. Printed by The Heintzemann Press, Boston.

No. 18. Announcement form, showing the adaptation of a missal decorative initial and consistent rubrication. Printed by The Gillis Press, New York.

No. 19. Order of Service, with appropriate border and rubrication. Printed by The De Vinne Press, New York.

No. 20. Church Bulletin titles, showing simple yet appropriate styles in rule work and display. Composed by Low Brothers, Evanston, Ill.

No. 21. Programme, in which the border and types are appropriately combined, producing a distinctly mediæval style. Printed by D. B. Updike, The Merrymount Press, Boston.

No. 22. Announcement form, composed in Italic types, with large initial giving accentuation to the form.

No. 23. Programme pages, showing tasteful and harmonious display, secured by the use of a single

series of type, in connection with rules and florets. *A.* Programme cover, composed in Ideal type. *B.* Composed in Priory.

No. 24. Circular, composed in Della Robbia capitals. Printed by The De Vinne Press, New York.

No. 25. Invitation form, composed in French Script, distinguished by the decorative character of the capitals. Printed by The De Vinne Press, New York.

No. 26. Library programme page, exhibiting well-balanced display lines and a slightly decorative effect produced by the use of a simple rubricated border. From The School of Printing, Boston.

No. 27. Programme page of distinctive quality. Composed in Caslon Old Style. Printed by D. B. Updike, The Merrymount Press, Boston.

No. 28. Menu page, showing the introduction of symbolic device and the decorative treatment of border in a tint. Printed by The Wayside Department, The University Press, Cambridge.

No. 29. Programme titlepage, composed in Old Style Caslon and Flemish Black, with the introduction of a symbolic device.

No. 30. Ticket form, composed in Della Robbia type, with rubricated border.

No. 31. Circular, composed in Old Style type, with initial of suitable decorative character. Printed by The De Vinne Press, New York.

No. 32. Pamphlet cover designs, showing excellent lettering combined with simple, decorative features. Designed by T. B. Hapgood, Jr., Boston.

No. 33. Book circular pages, showing a comparison of effect with and without rule borders. Composed by The Westminster Printery, New York.

No. 34. Introductory page of circular, composed in Cheltenham Old Style. Arranged by W. A. Bradley, The McClure Press, New York.

No. 35. Titlepages of circulars, showing consistency throughout by the use of a single series of type. From The American Book Company, New York.

No. 36. Text page of circular, showing use of rubricated borders. Arranged by W. A. Bradley, The McClure Press, New York.

No. 37. Pamphlet pages, showing decorative treatment produced by the use of devices appropriate to the subject matter. From circulars printed by The Patteson Press, New York.

No. 38. Oblong pamphlet titlepage, composed in Della Robbia type, combined with a harmonious border. Printed by The Wayside Department of The University Press, Cambridge.

No. 39. Pamphlet pages, composed in Avil type by The Wright & Joys Company, Milwaukee.

No. 40. Pamphlet page, composed in Caslon capitals and lower case, producing the highest

degree of legibility. From the American Book Company, New York.

No. 41. Book circular pages, showing interesting variations in the use of rules, typographic arrangement, and two forms of publishers' mark. Arranged by W. A. Bradley, The McClure Press, New York.

No. 42. Introductory page of catalogue, showing rubrication for border and panel treatment of heading. Composed in French Old Style capitals by The Morrill Press, Fulton, N. Y.

No. 43. Letter headings, arranged in panel forms.

No. 44. Ball order pages, showing the use of Old Style Antique, with contrasting black letter for accentuation. Composed by The Rowe Press, Bath, Maine.

No. 45. Programme titlepage, composed in Caslon Old Style, showing the introduction of decorative design.

No. 46. Letter headings, composed by The Heintzemann Press, Boston, The White-Evans-Penfold Company, Buffalo, and The University Press, Cambridge.

No. 47. Pamphlet cover, showing suitable decorative effect produced by large capitals and border. Composed by The Roanoke Press, Riverhead, N. Y.

No. 48. Announcement form, composed in Old Style Antique by The Prairie Press, Chicago.

No. 49. Circular, with head-band in rich color. Printed by The Heintzemann Press, Boston.

No. 50. Announcement, having distinction produced by the use of heading and large initial, supplemented by harmonious typographic treatment. Printed by The Heintzemann Press, Boston.

No. 51. Titlepage of circular, with simple border treatment in tint. Printed by The Wayside Department of The University Press, Cambridge.

No. 52. Tickets and announcement form, composed by the Geo. H. Ellis Company, Boston.

No. 53. Announcement card, with decorative initial and rubrication.

No. 54. Pamphlet pages, composed by The Patteson Press, New York.

No. 55. Announcement page, composed in the Village type, designed by F. W. Goudy, Hingham, Mass.

No. 56. Engraved title and text page of brochure, designed and composed by The Morrill Press, Fulton, New York.

No. 57. Examples of financial advertising pamphlet pages, showing titlepage, composed in Winchell type, and the use of architectural detail for page decoration. From pamphlet designed and printed by The Matthews-Northrup Works, Buffalo.

No. 58. Examples of financial advertising pamphlet pages, composed in Cheltenham type. From pamphlet printed by The Cheltenham Press, New York.

No. 59. Examples of financial advertising pamphlet pages, showing a rubrication from pamphlet designed and printed by Robert Grier Cook, New York.

No. 60. Pamphlet pages, showing fastidious effect produced by small types and wide margins. From pamphlet prepared by James Howard Kehler, Chicago.

No. 61. Titlepage of prospectus.

No. 62. Pamphlet pages, showing the introduction of decorative cut for heading. From pamphlet designed and printed for the Windsor Trust Company, New York, by the Charlton Press, New York.

No. 63. Rubricated title and text-page of illustrated book, designed and printed by Robert Grier Cook, New York.

No. 64. Rubricated circular, in which the illustrations have a rich color effect, due to the double-tone quality of the ink used. Printed by The Wayside Department, The University Press, Cambridge.

No. 65. Pamphlet titlepages. *A.* Composed in Caslon Old Style, showing the introduction of symbolic device. *B.* Composed in French Old Style capitals. From pamphlets printed by The

Wayside Department of The University Press, Cambridge.

No. 66. Examples of rule borders. Designed by Morgan Shepard, San Francisco. From pamphlet printed by The Stanley-Taylor Company, San Francisco.

No. 67. Examples of catalogue typography and illustration, composed in Caslon Old Style and Old Style Antique. Designed and printed by The Southgate Press, Boston.

No. 68. Pamphlet pages. Designed and printed by The Cheltenham Press, New York.

No. 69. Announcement form, showing attractive typography and the use of color. Printed by The Wayside Department of The University Press, Cambridge.

No. 70. Catalogue titlepage, showing good balance of typography design and use of tint. From catalogue printed by The Patteson Press, New York.

No. 71. *A.* Introductory page in which the initial gives decoration and the half-tone shading blends well with the color effect. *B.* Text page, showing the decorative treatment, foreground, and harmonious adjustment of the illustration to the page. From catalogue designed and printed by The Binner-Wells Company, Chicago.

No. 72. Catalogue pages, showing decorative treatment of headings and brilliancy of illustration. Printed by The Southgate Press, Boston.

- o. 73. Examples of make-up of illustrations text pages. From "Colorado," a pamphlet printed by Rogers & Company, Chicago, for the Elgin Route.
- o. 74. *A.* Decorative text page of unusual fitness in ornament and color scheme. *B.* An excellent solution of the problem of combining illustrations, title lines, and text. From catalogue printed by the Robert Stillson Company, New York.
- o. 75. Examples of pamphlet typography and ornamentation, showing the reproduction of decorations in half-tone. Designed and printed by The Photographic Department of The Union Bank Note Company, Kansas City, Mo.
- o. 76. Examples of decorative titlepage and ornamentation with tint background. From catalogue printed by The Morrill Press, Fulton, New York.
- o. 77. Book circular, with decorations by William G. Goodhue. Printed by The University Press, Cambridge.
- o. 78. Pamphlet pages, composed in French Style, with decorations in colors. From pamphlet printed by The Southgate Press, Boston.
- o. 79. Decorative treatment of folder.
- o. 80. Announcement form, with designed border and showing the use of a tint background.
- o. 81. Catalogue cover, showing interesting treatment of cover design and simplicity in

typographic display. Printed by D. B. Updike, The Merrymount Press, Boston.

No. 82. Programme folder, showing the use of borders and color. Designed and printed by The Southgate Press, Boston.

No. 83. Catalogue pages, showing the introduction of decorative design and color. From catalogue printed by The Southgate Press, Boston.

No. 84. Christmas card, printed by D. B. Updike, The Merrymount Press, Boston.

No. 85. Circular, composed in Caslon Old Style, with decorative panel. Printed by D. B. Updike, The Merrymount Press, Boston.

No. 86. Rubricated letter-heading. Printed by The Heintzemann Press, Boston.

No. 87. Announcement form, composed in Caslon Old Style type, in panel form of display. The illustrations printed in a gray-black, approximating the original drawing. Printed by The Smith & Porter Press, Boston.

No. 88. Decorative treatment of catalogue pages. The color used for the initial and borders is also used as an underlying tone in the illustration. From pamphlet printed by The Frank Presby Company, New York.

No. 89. Music titlepages and pamphlets, showing the introduction of decorative details and well-balanced typography. Printed by The Heintzemann Press, Boston.

ILLUSTRATIVE PROCESSES

THE processes for the production of blocks and plates used in the printing press are three in number: (1) Relief Processes; (2) Intaglio Processes; (3) Planographic Processes.

The Relief Processes produce blocks of which those parts which are to carry the printing ink, and thus are to make the print, are left standing in relief above the level of the material out of which they are made, while the parts which are to show white in the printed picture are cut away.

Among the relief processes are wood-engraving, relief engraving on metal, line plate etching, half-tone etching. *The Intaglio Processes* produce plates, generally of metal, in which the parts that are to carry the printing ink are cut in or etched, so that they form depressions, while those parts which are to show white in the printed picture are left standing. Such a plate is inked so as to fill the intagliated parts with the ink, and after the surface has been cleaned to remove all superfluous ink, an impression is taken by pressing against it a piece of paper or other suitable material.

Among the intaglio processes are copper and steel engraving, copper plate etching, dry point engraving, mezzotint engraving, aquatint engraving, and photogravure.

The Planographic Processes use printing surfaces that are essentially at least, flat. The designs produced upon these surfaces accept the printing ink, whereas those parts which are to show white in the printed picture do not use it, — the antagonistic properties of grease and water governing the process. The materials used as printing surfaces in the older planographic processes

are stone (lithography) or metal, commonly zinc (zincography). To these materials the photo-mechanical processes have added glutinous substances (collographic or photogelatine processes). Aluminum is also employed to some extent as a substitute for lithographic stone.

(1) RELIEF PROCESSES

Wood-cutting (and Relief Engraving on Metal)

PRINTING from relief blocks cut or engraved for the purpose seems to be the oldest method applied to the production of pictures by mechanical means. The oldest dated pictures printed from relief blocks, so far known, are the "Virgin" of 1418, in the Brussels Cabinet, and the "St. Christopher" of 1423, in the Rylands Library of Manchester, England. As a rule these blocks, from the beginnings of the art to the end of the eighteenth century, were executed on wood—such as cherry, pear, etc., and in later times boxwood—cut in the direction of the fibre, that is to say, on planks. The tools used were knives. The aim of these woodcuts, properly so called, was the reproduction of designs in black lines on a light ground, or, in other words, of drawings in lines. The drawings were usually executed upon the plank in pen and ink, or sometimes on thin paper, which was pasted on the wood face downward, and the task of the wood-cutter was confined to the cutting away of the wood between the lines of the drawing. Sometimes relief blocks were executed also on metal, in which case gravers were used instead of knives.

No. 1. Old black-line relief block cut on a plank.

Lent by a Member of The Society of Printers.

No. 2. Impression from block, Dept. D, No. 1.

No. 3. Ecce Homo. Facsimile reproduction of Durer's engraving on wood.

Wood-engraving — Old White-line Work

THE natural result of the graver when used for the production of relief blocks is a white line. The graver removes the wood along its path. If, after a line with the graver has thus been cut, the surface of the block is inked it prints black, while the line, being free from ink, shows white. The white line forms the starting-point of modern wood-engraving.

No. 4. Example of white-line work.

Modern Wood-engraving

THE wood-cutter worked with knives on planks. The modern wood-engraver works with gravers and similar tools on wood across the grain (Dept. D, No. 6). The old black-line woodcuts are essentially facsimiles of drawings. With the introduction of modern wood-engraving the white-line came into use, it being the natural result of the graver when used for the production of relief blocks. Furthermore, the white-line led to the development of tint engraving to render the gradation of shades between black and white. While, therefore, the old wood-cutter had only one resource, the black line, the modern wood-engraver has three, — the black line, the white line, and *tints* in infinite variety. The introduction of the graver and of wood cut across the grain (Dept. D, No. 6) and of their result, the white line, is generally credited to Thomas Bewick (b. 1753, d. 1828), who was the first to make extended use of these means. With the introduction of the white line, the methods of placing the design on the block also underwent a change. The drawings in line were first superseded by wash drawings, and these by photographs on the wood (Dept. D, No. 8).

No. 5. Example of wood-engraving by Thomas Bewick.

No. 6. Boxwood block (cut across the grain).

No. 7. A photograph after portrait by Sargent.

No. 8. Photograph (Dept. D, No. 7) on the wood.

No. 9. Engraved block (incised lines filled with chalk). Engraved by T. H. Heard after an etching by Mielatz.

No. 10. Proof of block, Dept. D, No. 9.

No. 11. Original drawing on wood by Francis Lathrop (formerly the engraver would cut directly through the original drawing, but in this case ~~the~~ was preserved by re-photographing on another block).

No. 12. Proof of block, Dept. D, No. 11.

Nos. 13-16. Proofs by Timothy Cole.

No. 13. John Bellini — Old Italian Masters — “Madonna and Child.”

No. 14. Rubens — Old Dutch and Flemish Masters — “Jacqueline de Castres.”

No. 15. Constable — Old English Masters — “The Cornfield.”

No. 16. Velasquez — Old Spanish Masters — Portrait, Head of a Man.

Nos. 6-16 lent by The Century Co., New York.

. 17. Photograph from fresco and pencil sketch on same, made by Timothy Cole, showing his method of working.

by Mrs. John E. Devlin.

Wood-engraving — Mechanical Work

ruling machine, a comparatively recent invention largely used for engraving straight and waved radiating lines, circles, etc.

. 18. Exhibit of the various kinds of work executed by the ruling machine.

. 19. Original photograph and retouched photograph of machine.

. 20. Proof of block, Dept. D, No. 19.

. 21. Proof from a half-tone relief plate of subject (Dept. D, No. 19) for comparison.

Line Plate (Relief Etching) Process

simplest method of producing blocks printable in type press without engraving by hand is to etch on or copper the lines and dots composing the design, in relief. In this the metal around the lines is bitten with a mordant, the lines being protected with a composition capable of resisting acid. Gillet of Paris, took out a patent in 1850, was the first commercial successful operator. The image may be either drawn by hand direct on the metal, or transferred from prepared paper on which the image is drawn in a transfer ink (transfer ink), or transferred from another plate or stone by means of impressions made in transfer ink, or photo-mechanically. The photo-mechanical process is generally employed, and may be described as follows :

A zinc or copper plate, highly polished, is coated with asphaltum or with albumen mixed with a bichromate and exposed to light under a reversed black and white negative (Dept. D, No. 23) made from the drawing to be reproduced (Dept. D, No. 22). After exposure it is washed with a suitable solvent, which removes the unchanged part of the coating, leaving the lines of the design upon the plate in hardened asphaltum or albumen (Dept. D, No. 24). It is then etched in an acid bath (Dept. D, No. 25). The plate is next trimmed to remove imperfections, and mounted type high on a wood block (Dept. D, No. 26).

No. 22. Original drawing by Will Bradley.

No. 23. Negative from drawing, Dept. D, No. 22.

No. 24. Transfer on zinc from negative, Dept. D, No. 23.

No. 25. Transfer on zinc (Dept. D, No. 24) etched only.

No. 26. Transfer on zinc (Dept. D, No. 24) trimmed and mounted.

No. 27. Proof from block, Dept. D, No. 26.

Nos. 23-27 from Massachusetts Engraving Co., Boston.

*The Line Plate (Relief) Processes Applied to
Color-printing*

THE specimens shown illustrate the method of making prints in colors. For the print in colors (Dept. D, No. 32) the drawing which served as an original (Dept. D, No. 28) was reproduced in three printings. In the making of the color blocks the negative of the drawing serves merely as a guide, or key, for etching and cutting the colors required. Each color requires a separate plate

(Dept. D, No. 29). The guide or key may be printed thereon in the same manner as previously described (Dept. D, No. 24), or after the key or black plate is etched the drawing may be transferred to separate plates. Those portions of the plate which are required to print in color are drawn or inked in by hand (Dept. D, No. 30), and the lines not desired either scraped off the plate or routed off in the routing machine. To produce other than solid tones, grained zinc is sometimes used and the drawing made thereon with a specially prepared fatty crayon. Usually, however, the grain is made on the metal after the drawing has been transferred. This is done by dusting powdered asphaltum on the plate and subjecting the plate to a sufficient amount of heat to partially melt the asphaltum particles to make them adhere. The plates are then etched, trimmed, and mounted on wood blocks (Dept. D, No. 31) and printed in the required colors (Dept. D, No. 32).

No. 28. Original drawing of decorative panel by Will Jenkins.

No. 29. Three transfers to zinc from drawing, Dept. D, No. 28.

No. 30. Three transfers to zinc from drawing (Dept. D, No. 28), two of which have colors filled in on plate.

No. 31. The three etched plates from transfers (Dept. D, No. 30), mounted on wood.

No. 32. Progressive proofs from plates, Dept. D, No. 31.

Nos. 29-32 from Suffolk Engraving & Electrotyping Co., Boston.

Half-tone Relief Plates

THE aim of this photo-mechanical process is to convert a photograph from nature or from a painting into a printable block or plate without the intervention of designer or engraver. It is self-evident that in order to be able to produce a "half-tone" block the flat and gradated tints must be broken up into corresponding masses of lines and dots. This is done by the interposition of a lined or grained "screen" between the sensitive plate in the camera and the original to be copied. To make a screen, two perfect plates of glass are covered with a thin film of opaque ground. Then by means of a diamond in an automatically governed ruling machine lines are drawn diagonally across each plate in one direction, just removing the "ground." The glass plates are then etched with fluoric acid, the ground removed, and the bitten lines are niellated (blackened) and polished. These two plates are then joined face to face, so placed that the diagonal lines cross. The lines on the screens are ruled at varying distances apart. The usual screen employed by engravers of to-day measures 150 lines to the inch; its printing quality upon the average coated paper is generally conceded to give the best results. Finer screens than 150 give more detail but less brilliancy, and coarser than 150 less detail and more brilliancy. Light can pass only through the innumerable minute white squares of such a screen. It is placed about a quarter of an inch before the negative in the camera, and the object is photographed through the screen. Consequently the negative (Dept. D, No. 25) is broken up into a great number of minute squares, which are stronger or weaker as the corresponding portions of the original object were lighter or darker. This negative is placed in contact with a polished sensitized copper (or zinc) plate and exposed to light (Dept. D, No. 36). The copper positive is further developed and

etched (Dept. D, No. 37) in an acid bath, and mounted on wood block.

No. 33. A print of screens varying from 65 to 200 lines to the inch.

One Color (150 Screen)

No. 34. Photograph from Sargent's "Prophets."

Lent by Curtis & Cameron.

No. 35. Negative from photograph, Dept. D, No. 34.

No. 36. Transfer on copper from negative, Dept. D, No. 35.

No. 37. Transfer (Dept. D, No. 36), etched.

No. 38. Plate (Dept. D, No. 36), finished and blocked.

No. 39. Proof from block, Dept. D, No. 38.

Nos. 35-39 from James S. Conant Co., Boston.

All half-tone plates are lowered in tone like photographs. No absolute white can be produced, as the vestiges of the screen do not vanish completely. This drawback is partially remedied by re-etching and engraving by hand such portions of the plate as require to be lightened and burnishing those parts which should be darkened. Dept. D, No. 40 shows a print from a half-tone plate re-etched and engraved.

No. 40. Proof of half-tone engraving re-etched and engraved, reproduced from drawing by Karl Anderson.

Lent by John Andrew & Son, Boston.

*Half-tone Copper Relief Plate Supplemented with
Zinc Color Plate*

THE half-tone plate is prepared as above stated, and the color plate as described under Line Plate Processes Applied to Color Printing.

No. 41. Pastel drawing with colored tint, by Charlotte Weber.

No. 42. Progressive proofs from blocks made from drawing, Dept. D, No. 41.

Half-tone Process (Duotint)

Two plates employed

IN this process of reproduction two negatives are made of the original, the half-tone screen on each being placed at a slightly different angle. Both plates are usually printed in the same color, but one lighter in tone than the other. Richer and softer effects are obtainable by this process than by the single half-tone plate.

No. 43. Screens shown on large scale.

No. 44. Progressive proofs from blocks made by half-tone duotint process.

Half-tone Relief Process (Three-color Process)

THIS is a photo-mechanical half-tone process for reproducing in three colors — yellow, red, and blue — all the colors which may be in an original painting or other object, and is based upon the theory that all colors are formed of yellow, red, and blue. It is first necessary to prepare negatives, one from which the plate to print yellow is made. This is done by specially sensitizing the collodion film and by placing between the picture and the lens a colored filter which neutralizes all the colors but the yellow in the picture. (A filter is a piece

of colored glass, colored gelatine on glass, or colored liquid between two pieces of glass.) For the red plate the filter neutralizes the blues and yellows, and for the blue plate the yellows and reds. Half-tone plates are prepared in the usual manner. (See Half-tone Relief Plates.) The usual sequence of printing the plates is first yellow, then red, and lastly blue.

No. 45. Original drawing. "Design for Church Window."

No. 46. Three negatives, with color filters, from drawing, Dept. D, No. 45.

No. 47. Three finished half-tone plates from negatives, Dept. D, No. 46.

No. 48. Progressive proofs from plates, Dept. D, No. 47.

Nos. 45-48 from The Sparrell Print, Boston.

Half-tone Relief Process (Four-color Process)

IN three-color printing every part of the picture is composed by three colors, and if one of them lacks intensity, the character of the picture is impaired. Colors become incorrect and grays are rendered violet or brown. Large surfaces such as backgrounds often have a mottled and crude appearance, due to the imperfections of the working materials and uneven distribution of color. To overcome these defects a fourth printing plate is employed. Properly retouched and printed in a neutral gray or black, this plate increases the depth of the shadows and produces a harmonious color effect.

No. 49. Progressive proofs of four-color process print. Piot's "Youth."

Lent by a Member of The Society of Printers.

(2) INTAGLIO PROCESSES

Copper Plate Engraving

No. 50. One illustration of the German School, XVI century.

No. 51. Four illustrations of the French School, XVIII century.

Dry Point Engraving

No. 52. Portrait.

Aquatint Engraving

No. 53. Landscape by Brunet-Debaines.

Soft Ground Engraving

No. 54. Rouen.

Copper Plate Etching

No. 55. Three illustrations of the Dutch School, XVII century.

No. 56. Portrait, "Ralph Waldo Emerson," engraved by W. H. W. Bicknell. See Dept. D, No. 60, for reproduction by photogravure process.

Lent by A. W. Elson & Co., Boston.

Steel Plate Engraving

No. 57. Engraved half-title.

No. 58. Portrait in line and stipple.

Mezzotint Engraving

No. 59. Reynold's "Infant Samuel." Engraved by Thomas Lupton, 1822.

Lent by a Member of The Society of Printers.

Photogravure Process

- o. 60. Portrait, "Ralph Waldo Emerson," reduced from copper plate etching, Dept D, 56.
 it by *A. W. Elson & Co., Boston.*

(3) PLANOGRAPHIC PROCESSES

Lithography

- o. 61. Print from pen drawing on polished ie.
 it by *The Heliotype Co., Boston.*
- o. 62. Print from crayon drawing on grained ie.
 it by *a Member of The Society of Printers.*
- o. 63. Print from engraving on stone. (This actually an intaglio process print, though ed among the planographic processes for venience.)
 it by *The Heliotype Co., Boston.*
- o. 64. Pen-and-ink drawing by Walter Camp-
 ..
- o. 65. Photo-lithographic reproduction of wing, Dept. D, No. 64.
 nt by *Walter Campbell, Boston.*
- o. 66. Photo-lithography in color. Progressive ofs of "Columbia's Courtship," by L. Prang Co.
- o. 67. Photo-lithography in color. Reproduc-
 1 of painting by Robert Blum.

No. 68. Example of chromo-lithography. Reproduction of painting by E. A. Abbey.

Lent by a Member of The Society of Printers.

Photo-gelatine Process

(Heliotype, Albertype, Autoglyph, Collotype)

No. 69. A photograph.

No. 70. Reproduction of photograph, Dept. D, No. 69.

No. 71. Photo-gelatine print direct from original negative.

No. 72. Reproduction of engraving in line.

No. 73. Three-color photo-gelatine print, supplemented with black print from lithographic stone.

Nos. 69-73 from The Heliotype Co., Boston.

Heliochrome Process

No. 74. Trinity Church, Boston. Progressive proofs. The colored tints were printed from lithographic stone, and the black gelatine print printed over it.

Lent by a Member of The Society of Printers.

(Further information regarding Illustrative Processes may be obtained from books on the subject at the Boston Public Library and the Print Room of the Boston Museum of Fine Arts.)

PAPER AND PAPER-MAKING

It is not the purpose of this exhibit to cover the technical side of this subject, but merely to give some idea of the kinds of paper in use to-day for printing purposes, and to illustrate in a general way the process by which it is manufactured.

The first paper of the sort familiar to us (from fibrous matter reduced to a pulp) was made by the Chinese, in the second century B. C., from the bark of the mulberry tree. The branches of the tree were first boiled in lye to remove the bark. Then followed maceration in water for several days, after which the outer part of the bark was scraped off and the inner part boiled in lye until separated into fibres. These were washed in a pan or sieve, then worked by hand into pulp which was spread on a table and beaten fine with a mallet. The pulp thus obtained was placed in a tub containing an infusion of rice and a root called "Oveni" and thoroughly stirred, to mix the materials.

The sheets were formed by dipping a mould, made of strips of bulrushes confined in a frame, into the vat containing the pulp. The sheets were then placed one above another between rushes, weights were applied to press them, and they were afterward thoroughly dried in the sun.

While the Chinese methods of producing paper and the product itself were of the crudest, yet the principles involved have continued even to the present day, though finer materials and improved processes have made possible the beautiful sheets of hand-made paper with which we are familiar. A limited quantity is still made for De Luxe editions of fine books, note-paper, etc., yet the process is so laborious and expensive as to preclude its use for general commercial purposes.

Though the Chinese claim the invention as early as B. C. 123, the substance did not become known to Europe until the period following the conquest of Samarkand by the Arabs (712 A. D.). One of the earliest extant paper manuscripts, now in the Royal Library in Paris, bears the date 1050. In 1085 there was a paper mill in Toledo, Spain. In 1221 Frederick II. of Germany, on account of the bad quality of paper, issued an order nullifying all public acts which should be upon cotton paper, allowing two years to transcribe upon parchment all such as then existed. In 1276 there was a paper mill at Fabriano, in Northern Italy, which is still in operation. In 1325, a century before Gutenberg, there was a paper mill in Mainz. In 1333 the practice began of placing water marks in paper to distinguish the maker, showing that even at that early date there was some competition in the industry.

The increasing demand for paper and the lack of adequate facilities for meeting it culminated in the invention in England, in 1804, by Henry and Seeley Fourdrinier, of a machine for the making of paper in a continuous web, and the paper machines of to-day, though greatly improved, are still called Fourdrinier machines.

The earliest examples of paper available for this exhibition are taken from a collection of old papers, the property of the Boston Public Library, the date assigned to the first being 1340.

No. 1. Specimen of Italian paper made about 1340. It is a rather coarse, thick substance, with a crudely drawn water mark of a bull's head with the horns raised perpendicularly.

Lent by the Boston Public Library.

No. 2. Paper made about 1401. The wire marks in this specimen are less noticeable, giving a

better surface for writing. The water mark is a unicorn.

Lent by the Boston Public Library.

No. 3. Italian paper made about 1509. This specimen is thinner than the others, undoubtedly due to the influence of printing.

Lent by the Boston Public Library.

No. 4. Paper made about 1556. The wire marks in this paper have been made still finer in the endeavor to make a smoother paper with a better printing surface. The water mark is a hand and a cross, drawn very simply, yet showing far greater care in execution than the previous examples.

Lent by the Boston Public Library.

No. 5. Paper made about 1575. The water marks from this time on become very much more elaborate and confused. The water mark in this paper is a spread eagle.

Lent by the Boston Public Library.

In 1690 William Rittinghuysen, a native of Broich, Holland, with William Bradford, the printer, established the first mill in America, in Roxborough, near Philadelphia. In 1730 the first mill in New England went into operation, in Milton, Mass.

In 1751, owing to the limited supply of rags, sundry experiments were made to find a substitute. M. Guettard showed that paper could be made from bark, leaves, wood, etc., yet more than a hundred years elapsed before this was done upon a commercial basis.

In 1757 a new kind of paper was introduced called "papier velin" (paper like parchment). It afterwards

became known as "wove paper" because it was made upon a woven wire mould, a name distinguishing it from "laid paper," made on a mould in which the wires are laid in parallel columns.

The paper used in the Vergil printed by Baskerville which is exhibited in Dept. A, No. 16, is said to have been the first wove paper made.

In 1776, owing to the scarcity of paper, the Massachusetts House of Representatives resolved that the committee of correspondence in the several towns be required to appoint suitable persons to receive rags for the paper mills, and the inhabitants asked to be careful to save even the smallest quantity of rags suitable for making paper.

No. 6. A Sermon which required one hour to deliver, closely written on account of the scarcity of paper. Written in 1775.

Lent by a Member of The Society of Printers.

No. 7. Another Sermon, written fifteen years later, showing that the scarcity still existed.

Lent by a Member of The Society of Printers.

In 1802 a patent was secured in England by W. Plus for a mode of coloring paper which consisted in mixing with the pulp snuff, bran, hay, and any substance possessing the color which was desired to be imparted to the paper.

No. 8. Cover paper in use in 1807, evidently colored by the Plus method.

Lent by a Member of The Society of Printers.

In 1785 chlorine was discovered as an agent for bleaching. In 1790 the practice began of putting bluing into the pulp to make white paper. Examples of

paper made about this time show a distinct deterioration in quality as a result of inexperience with the use of these new methods.

No. 9. Example of paper made about 1796 showing the blue-white color.

Lent by a Member of The Society of Printers.

In 1799 Louis Roberts, at the mill of François Didot in France, succeeded in building a device upon which paper could be made in a continuous sheet. In 1804 Henry and Seeley Fourdrinier, of London, purchased the patents of Roberts and Didot and erected a mill at Boxmoor. They expended large sums and the venture proved a financial failure, yet it is this type of machine that is now most used in making paper.

The next twenty-five years form an interesting period in the development of paper-making. The paper machine was very imperfect, and required constant manipulation and much patience to keep the pulp flowing in a uniform manner. The manufacturers of hand-made paper, on the contrary, had become so skilful that the movements of each workman was almost mechanical. Strangely enough it is now almost impossible to tell whether some of the paper made at this time was by hand or by machine. It was not until May 20, 1822, that the Parliamentary papers of the English House of Commons appear on paper made by machinery. The change was evidently not popular, for the next three volumes are printed on hand-made paper, and for a number of years after that reports of special committees were printed upon paper made by the old method.

No. 10. Vol. 5, Parliamentary Papers, May 20, 1822. The left-hand page is printed upon hand-made paper, the right-hand page upon machine-

No. 29. Modern paper mills. Capacity, over 100 tons daily. Hands employed, about 1,000.

No. 30. Pictures:

A. Poplar wood pile.

B. Rags for making paper as they arrive at the mill.

C. A Beater. The rags, wood fibre, coloring material, sizing, etc., are mixed in this oval tank, in which revolves a cylindrical "roll," provided with radial "bars" or knives. These knives tear and reduce the stock to a fine pulp, preparing it for the principal operation — that of forming the sheet.

D. An up-to-date paper-making machine, width 145 inches, capable of making a web of paper $11\frac{1}{4}$ feet wide with a product of about 25 tons per day.

E. Another view of a paper machine.

F. Paper cutters.

G. Supercalenders.

No. 31. Samples showing different stages in the reduction of linen or cotton rags to fibre for making paper:

A. Cotton and Linen Rags

These, after having been selected and assorted, are cut up rather finely; now ready for the boiling or leaching process.

B. Rags after Boiling

These rags have been treated with a solution of calcium hydrate in closed vessels under a pressure of about forty pounds of steam to the square inch. This process has dissolved out any oily matter, and renders the stock more easily washed and bleached.

C. Rag Stock

This shows rag stock after boiling and washing free from dirt. This is now ready for bleaching.

D. Rag Stock after Washing and Bleaching

During the process of washing, the rags are trituated and the fibres separated by means of a grinding process. This is frequently called "half-stuff."

E. All Rag Fibres

Taken from the beater.

No. 32. Samples showing different stages in the reduction of wood to fibre for making paper (poplar by soda process):

A. Poplar Wood after Chipping

It is necessary to reduce the log to small chips like this before the disintegrating process is begun.

B. Poplar Wood Fibre after "Cooking"

The chips are boiled in a closed vessel with a solution of strong caustic soda and under 110 pounds steam pressure. The result is like this.

C. Poplar Fibre after Washing and before Bleaching

The shade of this material is lighter than the newly cooked fibre, because the soluble material has been washed out. It is now ready for bleaching.

D. Poplar Fibre after Bleaching

This is now ready for the beating engines.

E. All Wood Fibres

Taken from the beater.

No. 33. Materials used in paper-making.

A. Rosin Size

Made by boiling rosin in solution with soda. This is applied to the stock at the beater in order to make the paper less absorbent.

B. Casein

A material prepared from skim milk and used as a substitute for glue in connection with clay for the coating of paper.

C. China Clay or Kaoline

Carefully prepared and washed to free it from grit, iron, etc., is used in connection with casein or glue for coating papers, also as a "filler" in the body of some paper as an aid to color finish and softness.

D. A Mixture of Rag, Spruce, and Poplar Fibre after being Mixed in the Beating Engine and Partially Ground or Beaten

At this stage of the process the coloring, sizing, etc., are added.

E. Fibres Prepared for the Paper-making Machine

This exhibit shows the fibres thoroughly reduced and in exactly the consistency in which they flow on to the wire cloth of the paper machine.

F. Bleached Sulphite Fibre

This is spruce wood fibre treated like the poplar fibre except that a solution of sulphureous acid liquor is used instead of caustic soda. The bleaching process is carried out in large tubs or tanks, the fibres being in suspension in a large quantity of water. A solution of chloride of lime is added, which bleaches the stock to the proper color.

G. Laid-Wire Cloth

Used for moulds for making paper by hand and for covering dandy rolls for paper machines.

H. Wove-Wire Cloth

Used for moulds for making paper by hand and for covering dandy rolls for paper machines.

Materials for Paper-making

THE principal fibrous materials used to-day in the manufacture of paper for printing purposes are linen and cotton rags and wood pulp (generally poplar or spruce). Until about 1870 rags were used almost entirely, but at that time wood fibres were introduced and by their use manufacturers were able to meet the demand for good but cheaper paper, and this material has been and is of great commercial value (Dept. E, No. 13).

Mould for Making Paper by Hand

MOULDS are made of laid or woven wire of the same size as the sheet of paper which is to be made, supported by a wooden frame underneath. Above this wire is placed a very shallow and narrow frame known as the "deckle" which in size and shape corresponds exactly with the mould. The sheet is formed by dipping the mould into the mass of pulp and filling it evenly with the top of the deckle, the thickness of the paper being determined by the skill of the workman. The water drains through the wire cloth as the mould is gently shaken by the operator. The deckle is then removed and the sheet of paper formed is taken off on a felt and afterwards dried, pressed, and finished according to the purpose for which it is intended.

Laid Paper

THE term "laid paper" was derived from the style of wire upon which the sheet is formed in making paper by hand, and used in making "dandy rolls" for paper machines. The wires are laid very close together and joined and held in position by cross wires at intervals varying from one-half to one inch, as desired (Dept. E, No. 16).

Wove Paper

THE term "wove paper" was derived from a wire, woven like cloth (first made about 1750), upon which the sheet is formed in making paper by hand and used in making "dandy rolls" for paper machines (Dept. E, No. 17). All previous paper had been made on laid wire.

Supercalendered Paper

SUPERCALENDERED paper is made by passing a continuous web of paper through a stack of heated steel rolls called "super calenders" (name derived from "calendra," a corruption of "cylindrus," a roller or cylinder), driven in perfect contact under pressure and at a speed varying from one hundred to five hundred feet per minute. This process gives the paper a smooth and polished surface which is principally used for the printing of woodcuts, line plates, and other similar processes of illustration in connection with letterpress (Dept. E, No. 19). This method of giving paper a smooth surface was invented about 1830.

Coated or Enamelled Book

COATED paper is made by applying to the surface of paper a coating generally composed of a mixture of clay and glue or casein, which fills the uneven surface of the paper and makes possible, by calendering, a glossy, even surface (Dept. E, No. 22). First introduced in the early 80's for book purposes to meet the demands of half-tone printing, the plates for which are very shallow, requiring a paper with a perfectly smooth and uniform finish.

Cameo Plate Coated Book

CAMEO plate paper is surface coated and is receptive to the shallow plates used in half-tone printing. It

possesses, however, a surface devoid of shine in contrast to the regular enamelled book. (Dept. E, No. 21.)

Deckle Edges

DECKLE edges are the rough edges seen in some sheets of paper. They are made by contact with the "deckle frame" in making paper by hand and on the paper machine by contact with the deckle strap, which controls the width of the web being made on the wire. In high-grade machine-made paper this deckle edge is often left on to imitate the hand-made, but is usually trimmed off, so as to leave the edges smooth.

Water Mark

A WATER mark is a design, word, or letters woven into the laid or wove wire cloth which leaves its imprint in the paper. It is best seen by looking through the sheet. First known use about the year 1330.

Dandy Rolls

DANDY rolls are hollow cylinders covered with wire cloth, either laid or wove, under which the paper passes before leaving the wire on the paper machine. All water marks, patterns, and designs which it is desired to have appear in the paper are woven into the covering of the dandy roll and impressed upon the soft sheet and are permanently fixed in the fibres.

Clay

CHINA clay, or kaolin, is used in the manufacture of paper as a "filler" in the body stock to help in color and finish, or as a coating in connection with glue or casein applied to the surface, as in coated or enamelled book paper.

Sizing

WITHOUT sizing all papers would be more or less absorbent like blotting paper. "Size," which is made

